

**School of Accounting  
Curtin Business School**

**Performance Measurement and Accountability  
in Indonesian Local Government**

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**This thesis is presented for the Degree of  
Doctor of Philosophy  
of  
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## **Declaration**

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgement has been made. This thesis contains no material which has been accepted for award of any other degree or diploma in any university.

Signature :.....

Date : 4 July 2011

## Dedication

*Love begins at home*

"My home is my heaven"

(The Prophet Muhammad)

This thesis is dedicated to my family members:

*Elin – Almer – Arrania*

## **Abstract**

Performance measurement and accountability in the management of public sector programs have long been seen as central factors in public management research globally. For more than two decades, in many developed countries, heightened interest in performance measurement in government organisations has held tremendous promise for both academics and practitioners.

Despite the global trend, there has been little research on performance measurement and accountability in Indonesia. This paucity exists even though regulations have been in existence for more than a decade requiring government organisations to prepare and submit an ‘accountability of performance report’ as a crucial component of Indonesia’s public sector reform. This thesis investigates the implementation of performance measurement systems in Indonesia during the first wave of public sector reform. Specifically, it examines factors affecting the development and use of performance indicators in Indonesian local government (ILG).

Employing a mixed research methodology, the thesis utilises a combination of a nation-wide survey and follow-up in-depth interviews with local government senior officials who are responsible for preparing performance reports. Specifically, the study explores the experiences and perceptions of government officials regarding the development and use of performance indicators and accountability practices in Indonesian local governments. The research findings contribute not only to the academic literature but also to practical public policy. The results indicate that metric difficulties, technical knowledge, management commitment, legislative requirement, and organisational capacity all have an effect on the development and use of performance indicators and accountability practices in ILG. Legislative requirement and management commitment have the strongest influence.

The more contextual reasons and motivations behind the implementation process were also investigated and are illustrated in this thesis. For this purpose, institutional theory was used as the theoretical framework to better explain and understand the issues. The findings revealed that institutional isomorphism did contribute to the process of decision making. All three institutional components of isomorphism—

coercive, mimetic and normative pressures—were found in ILG with coercive pressure found to be the strongest influence.

The findings of this research have academic implications for scholars in public sector management and practical implications for many different parties, namely: 1) central government; 2) local government; 3) government auditors; and 4) universities. The findings provide an overview of performance measurement and accountability practices in a local government context. Specifically, this thesis provides important evidence regarding factors influencing the development and use of performance indicators, as well as factors hindering the implementation of performance measurement systems. In addition, it reveals the influence of isomorphic pressures in the implementation of performance measurement systems in Indonesia.

Results revealed in the thesis are useful in evaluating the success or failure of the past implementation process. More importantly, the findings will be essential in helping to determine current and future policies and to ensure their continued success. This thesis provides analyses on the results of a decade of reform efforts in the area of public sector performance measurement and accountability in Indonesian local governments. With the recently-launched bureaucratic reform marking the second wave of reform (2010-2025) to improve Indonesian government, a reform effort that includes for the first time the vice-president's office, research into performance measurement and accountability practices in the first wave of reform (1999-2009) is especially timely.

In summary, the significant contributions this thesis makes to performance measurement and accountability literature are threefold. Theoretically it provides a relevant exemplar regarding the application of institutional theory on performance measurement research in a developing country. Methodologically it contributes to the increasing use of mixed-method research. Analytically it provides evidence of the use of partial least squares as a relevant analytical tool. Further, this thesis paves the way for future research in the relatively unexamined area of public sector performance measurement and accountability in Indonesia.

## Acknowledgement

Proclaim (or read) in the name of thy Lord who created.  
Created man out of a leech-like clot:  
Proclaim and thy Lord is most bountiful,  
Who taught (the use of) the pen,  
Taught man what he knew not.  
(Al-Alaq: 1-5)

First of all, I would like to say thank you to Allah the Almighty for the countless blessings given to me and my family, not only during my doctoral journey but also throughout our entire lives. Without the blessings of Allah everything I do in this world is simply meaningless. Many people have played a role directly or indirectly in the completion of this thesis and hence deserve recognition and appreciation.

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## **List of Abbreviations**

AAA	American Accounting Association
AVE	Average Variance Extracted
BPKP	Badan Pemeriksa Keuangan dan Pembangunan/ Government Auditor
DPR	Dewan Perwakilan Rakyat/Parliament
DPRD	Dewan Perwakilan Rakyat Daerah /Local People Representative Board
FDI	Foreign Direct Investment
GAO	Government Accounting Office
IASs	International Accounting Standards
IFRS	International Financial Reporting Standards
ILG	Indonesian Local Government
IMF	International Monetary Fund
Inpres	Instruksi Presiden/Presidential Instruction
ICMA	International City Management Association
ITB	Institut Teknologi Bandung/Bandung Institute of Technology
KKN	Korupsi, Kolusi dan Nepotisme/Corruption, Collusion and Nepotism
LAN	Lembaga Administrasi Negara/State Administration Institute
LAKIP	Laporan Akuntabilitas Kinerja Institusi Pemerintah/Government Institution Accountability of Performance Report
LOGOTRI	Local Government Training and Research Institute
MEP	Magister Ekonomika Pembangunan/ Master of Economic Development
MoFA	Ministry of Finance Affairs
MoHA	Ministry of Home Affairs
MPR	Majelis Permusyawaratan Rakyat/People Representative Assembly
NGO	Non-Government Organisation
NPM	New Public Management
OECD	Organisation for Economic Cooperation and Development

OLS	Ordinary Least Squares
OPEN	Online Procedure Enhancement for Civil Application
Permendagri	Peraturan Menteri Dalam Negeri/ Ministry of Human Affairs Decree
PLS	Partial Least Squares
PMS	Performance Measurement Systems
PP	Peraturan Pemerintah/Government Regulation
RPJM	Rencana Pembangunan Jangka Menengah/Middle-Term Development Plan
SAP	Standar Akuntansi Pemerintah/ Government Accounting Standard
SEM	Structural Equation Modelling
UGM	Universitas Gadjah Mada/Gadjah Mada University
UI	Universitas Indonesia/University of Indonesia
UK	United Kingdom
UNCHS	United Nation Centre for Human Settlements
UNDP	United Nation Development Programme
USA	United States of America

## Thesis Related Publications

### Conference Publications and Presentations:

1. Akbar, R., R. Pilcher, and B. Perrin. 2010. *Performance measurement in Indonesia: The case of local government*. In *Public/Non profit*, ed. Accounting and Finance Association of Australia and New Zealand, New Zealand: Accounting and Finance Association of Australia and New Zealand.
2. Akbar, R., R. Pilcher, and B. Perrin. 2010. *Accountability and performance measurement: A Nation-Wide Survey of Indonesian Local Government*. Paper presented at the 2nd Indonesian Regional Science Association (IRSA) Conference, Surabaya, Indonesia, July 28–29, 2010.
3. Akbar, R. 2011. *Performance measurement in Indonesian Local Government: To perform or to simply conform*. Paper has been accepted and will be presented at the 5th IIUM International Accounting Conference (INTAC), Kuala Lumpur, Malaysia, 12–13 July, 2011.
4. Akbar, R. 2011. *Accountability in decentralisation era from the perspectives of Local Government officials: A portrayal of a decade of reform*. Paper has been accepted and will be presented at the 3rd Indonesian Regional Science Association (IRSA) Conference, Padang, Indonesia, July 19–21, 2011.
5. Akbar, R. 2011. *Performance measurement in public services delivery: A symbolic conformity*. Paper has been accepted and will be presented at the 2nd International Research Symposium in Service Management (IRSM), Yogyakarta, Indonesia, 26–29 July, 2011.
6. Akbar, R. 2011. *Accountability in Indonesia's public sector: A symbolic compliance?* Paper has been accepted and will be presented at Indonesian Council Open Conference (ICOC), Perth, Australia, 26–28 September, 2011.

### Other Presentations:

1. Akbar, R. 2009. *Performance measurement in Indonesian Local Government*. Paper presented at the Curtin Business School (CBS) Doctoral Colloquium, Curtin University of Technology, Perth, Australia, 1–2 October, 2009.
2. Akbar, R. 2010. *Performance measurement in Indonesian Local Government: Findings from a National Survey*. Paper presented at the 1st Western Australia Indonesian Forum (WAIF) University of Western Australia, Perth, Australia, 4 February, 2010.
3. Akbar, R. 2010. *Performance measurement and accountability in Indonesian Local Government*. Paper presented at PhD Student/Emerging Scholars' Colloquium, The Asia Pacific Interdisciplinary Research in Accounting (APIRA) Conference, Sydney, Australia, 11–13 July, 2010.

# **Chapter 1: Overview of the Thesis**

## **1.1 Introduction**

Following a decade of major reform, this research aims to examine how performance measurement and accountability as the core of public sector reforms in Indonesia were implemented. Specifically, it examines factors affecting the development and use of performance indicators in Indonesian local government (ILG) agencies. The thesis provides an in-depth and comprehensive study of the area of performance measurement and accountability. In particular, it examines the implementation of Instruksi Presiden (Inpres)<sup>1</sup> No. 7/1999 regarding accountability reporting known as Laporan Akuntabilitas Kinerja Institusi Pemerintah (LAKIP)<sup>2</sup>, and its supporting related regulations. In doing so, the study explores the experience and perception of government officials regarding the development and use of performance indicators and accountability practices in an ILG context. The issues are investigated empirically through a complementary sequential mixed-method research approach using a combination of a nation-wide survey and follow-up in-depth interviews with local government senior officials (SOs) responsible for the preparation and submission of accountability reports. This chapter covers the background of the thesis (Section 1.2), the research context (Section 1.3) and research methods (Section 1.4), the significance and contribution of the research (Section 1.5), the limitations of the research methods used (Section 1.6), the organisation of the thesis (Section 1.7), and a summary of the chapter (Section 1.8).

## **1.2 Background**

Governance in organisations has been a compelling and much discussed issue since the beginning of civilisation. Many philosophers (e.g. Aristotle, Confucius, Adam Smith, and Karl Marx) have made their contribution to the subject. This thesis, however, raises issues on governance in the public sector in the modern era. Specifically, it aims to address the role of accountability and performance

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<sup>1</sup> Presidential Instruction

<sup>2</sup> Government Institution Accountability of Performance Report

measurement systems (PMS) as crucial pillars of public sector governance that have become increasingly important since the 1980s. At that time, a movement emerged in a number of Organisations for Economic Cooperation and Development (OECD) countries towards a new management approach in the public sector. This new approach was labelled New Public Management (NPM).

The rise of NPM during the 1980s was accompanied by changes in public sector accounting in a number of OECD countries. In this regard, accounting was viewed as a key element in the new conception of accountability due to its function as an effective medium for fostering high trust in market and private business methods. In the public sector, the notion of NPM was associated with the doctrines of public accountability and its related issues, and was viewed as the best practice in managing public organisations (Hood, 1995).

NPM is based on a fundamental concept that public sector organisations can, and even should, borrow many of the management strategies used in the private sector. This worldwide trend resulted in public sector transformation in the 1980s and 1990s, ranging from decentralisation and privatisation to the development of goal-driven and client-oriented organisations (Osborne & Gaebler, 1992). In relation to this movement, management techniques from the private sector (i.e. PMS) were introduced to many public sector organisations across the world. A great number of government entities in developed countries have now introduced elements of NPM (ter Bogt, 2004).

As a result of globalisation, some less developed countries have also introduced NPM elements such as accountability and performance reporting (e.g. Tooley et al., 2010). Indonesia is no exception. Studies examining accountability and performance reporting have been conducted in developed countries where the public are perceived to be more sophisticated. However, given there are different levels of sophistication within each population group, similar studies are required in less developed countries to provide more empirical evidence. This is important, as generalising across both developed and developing countries should be done with caution given the difference mentioned earlier (Pollit, 2006).

### **1.3 Research Context**

A reasonable knowledge of the context of the matter under examination is important to fully understand the significance of any research project. This section provides that context by introducing a brief history of Indonesian reforms and their subsequent impact on government.

#### **1.3.1 Indonesian reform**

Since 1998 Indonesia, as the largest archipelagic nation in the world, has experienced immense change following the downfall of the Orde Baru<sup>3</sup> regime that claimed absolute power for more than three decades. A year later, Dewan Perwakilan Rakyat (DPR)<sup>4</sup> made pivotal changes by passing important new laws. These two crucial laws, Undang-Undang<sup>5</sup> No. 22/1999 regarding decentralisation of local government and Undang-Undang No. 25/1999 regarding fiscal balance between central and local government, were enacted to mark the beginning of a new era called Reformasi.<sup>6</sup> As a consequence of these new laws, Indonesian society is experiencing a crucial transformation process towards a more robust democracy, which is marked by a shift in governmental style from an authoritarian and centralist government to one that is democratic and decentralised.

The ending of the authoritarian Orde Baru regime also opened up a new era of possibility for a democratic civilian administration based not on the dictates of an all-powerful president, but upon the rule of law and the disciplines of democratic accountability (Alm & Bahl, 2000). In the past two decades decentralisation has become a principal element of governmental reform in many developing countries (Bastian, 2007). As well, decentralisation as a strategy for economic and social development and for nation building has become accepted around the world. Most developing nations have by now adopted a decentralisation program in one form or another (Alm & Bahl, 2000). Decentralisation could well be the right policy for

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<sup>3</sup> The New Order under General Soeharto's Presidency (1967-1998)

<sup>4</sup> The Parliament of Republic of Indonesia

<sup>5</sup> Laws

<sup>6</sup> The Reform Era

Indonesia because it moves government decisions closer to the people. It is seen as a crucial ingredient of governance in a country that is so large and so diverse in population. With meaningful local elections, it is expected that decentralisation will lead to better public services, better public servants, and more public participation. In turn, decentralisation could make Indonesia a stronger, more stable, and more democratic nation (Alm & Bahl, 2000).

The population of Indonesia is about 240 million, of whom more than half reside on Java Island, where they are served by 115 local governments. Before 1999 under the Orde Baru administration, this island was the centre of major development programs whereas other islands, especially in the central and eastern region of the Indonesian Archipelago, were left far behind. Local autonomy is thus also intended to alleviate the development gap between in-Java and out-of-Java jurisdictions.

The new laws, Undang-Undang No. 22/1999 and Undang-Undang No. 25/1999, constituted a breakthrough from a centralistic government administration to a more balanced distribution of power, functions, and financial resources between central and local government. The two new laws were officially implemented on January 1, 2001, and gave wide-ranging autonomy to the district and city governments. These laws provided ILG with full authority in the planning-cycle process, and control over their finances (revenue and spending), civil services, and organisational setup. The law on fiscal decentralisation made fundamental changes to planning methods seen in the previous three decades, by introducing a unified budget and performance budgeting (Podger & Perwira, 2004).

Following the reform movement, Indonesia has experienced several major changes in its budgeting systems. For example, prior to the reform, Indonesia used a dual budget system whereby there was a separation between routine (operating) and development (capital) budgets (Blondal et al., 2009). The rationale behind this division was to emphasise the significance of development assistance from donors to Indonesian government. Unfortunately this division created much redundancy and duplication. The newly unified budget emerged to overcome this problem by combining routine and development in one single budget.



Unified budgeting was considered a major transformation in Indonesia. This change resulted in a more coordinated budget process and avoided many of the previous budget duplications. The newly-adopted unified budgeting system enables enhanced interaction between planning and budgeting functions within government. In addition, following the practices of many modern countries, performance budgeting was also introduced in the beginning of the reform era. The performance budgeting was adopted to improve control on expenditure as well as public services delivery. It included the adoption of performance measurement and new financial accounting systems.

Another important regulation, Undang-Undang No. 28/1999 on Clean Government, came into force in the same fiscal year. This law is important because it establishes essential principles of good governance such as transparency and accountability. These principles are highly relevant to the planning and performance budgeting process in Indonesian government at all levels. Finally, still in the same year, the second President of the Republic of Indonesia Habibie signed Inpres No.7/1999 on accountability reporting, which requires, from 2001, all government organisations to prepare and submit annual performance reports to central government.

Five years later two supporting regulations—Peraturan Pemerintah (PP)<sup>7</sup> No. 24/2005 regarding government accounting standards and Peraturan Menteri Dalam Negeri (Permendagri)<sup>8</sup> No. 13/2006 regarding financial management guidelines—were issued by the Indonesian central government to advance government policies regarding local autonomy. These two regulations were intended to help ILG in preparing three new kinds of annual report: 1) balance sheets; 2) financial statements; and 3) cash-flow reports. These financially-oriented reports were intended to accompany LAKIP (which is a more program-oriented report).

One of the objectives of this thesis is to provide an overview of a decade of reform in the field of performance measurement and accountability in Indonesia's public sector. Therefore, its focus is on the implementation of the LAKIP report as the first

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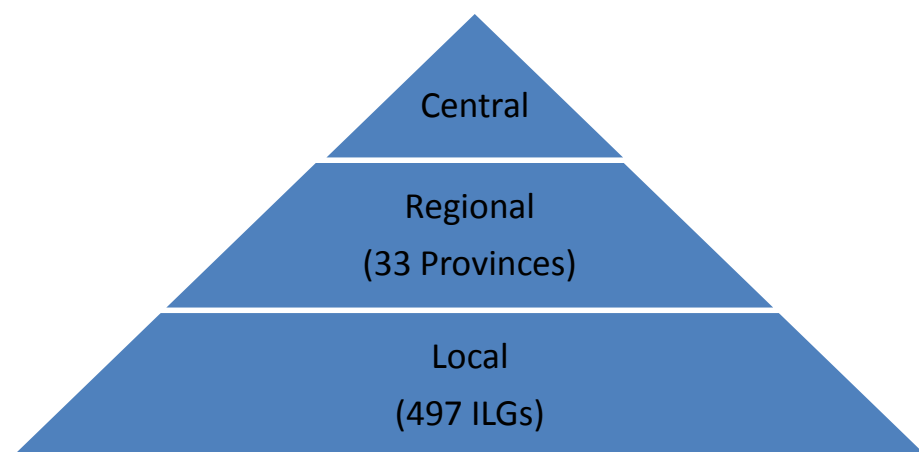
<sup>7</sup> Government Regulation

<sup>8</sup> Ministerial Decree

kind of government accountability report required in Indonesia since the beginning of the reform era in 1999. In addition, the majority of ILGs have continued to struggle to produce these new reports, as the accounting systems on which these three new reports were based were not yet well established when this research began in 2007.

### **1.3.2 Indonesian local government**

Indonesia is currently a democratic country with three tiers of government: central government; provincial government; and local government. The central government administration resides in Jakarta, the capital city of Indonesia. At the lower level, there are 33 provinces and 497 (as of 2009) local governments. There are two types of local government across Indonesia: 1) Kabupaten (district), and 2) Kota (city). In the past (before Reformasi), provincial and local governments were simply an extension of central government at the regional and local level. Government policies and programs were determined by central government. As a result the Gubernur (Head of Province) and the Bupati/Walikota (Head of Kabupaten/Kota), directly appointed by the president, were simply responsible for the implementation of the policies and programs issued by central government. Figure 1.1 presents the structure of Indonesian government from central to local level.



**Figure 1.1: Government Structure in Indonesia**

A pivotal change occurred in many aspects of local government management following the enactment of laws related to decentralisation. The most important

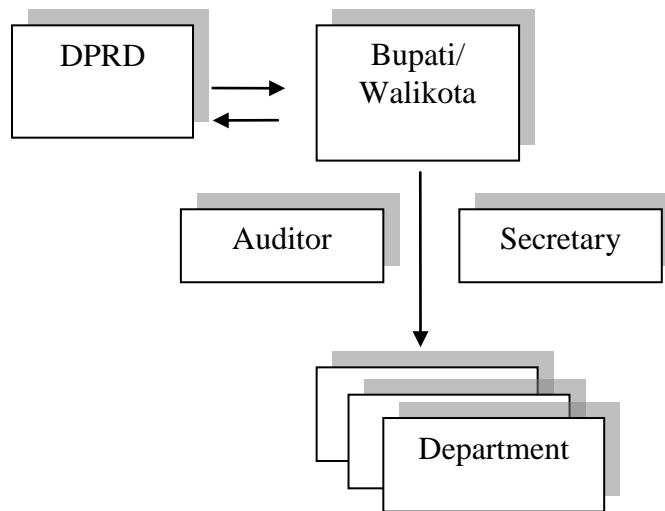
aspect was that the centralised government changed into a decentralised one. In other words, local government gained more autonomous power in managing its own business and resources. Autonomous power is required to provide better service quality to the local people as the main stakeholders in local government (Mardiasmo, 2002).

Just as there are in many democratic countries across the world, in Indonesia there are two branches of government: 1) the executive branch, and 2) the legislative branch. At the local level the executive branch of government is represented by a Bupati and Walikota. Both are now elected through a free and open election by local citizens under a democratic election process. On the legislative side there is Dewan Perwakilan Rakyat Daerah (DPRD) <sup>9</sup> whose members are also elected directly by local citizens through the same process. The election processes for the legislative and executive branches are held every five years. Both branches work together to serve local citizens. Every fiscal year, a district/city budget is proposed by the executive; the budget needs approval from the legislative branches before implementation commences. Financial resources to support the budget mostly come from the central government, except in the cases of several very rich ILGs.

Figure 1.2 presents a brief description of a typical local government in Indonesia.

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<sup>9</sup> Local People Representative Board



**Figure 1.2: Overview of Local Government Structure**

Both DPRD as the legislative and Bupati/Walikota as the executive branch are staffed by elected officials and form the top layer of ILG structure. The Secretary of an ILG as the highest-ranked official (appointed by the Head of ILG) and the Heads of Department are in the second and third layer respectively.

### **1.3.3 Accountability and performance measurement in Indonesian government**

As Indonesia is a developing country, the socio-economic condition in which Indonesian public sector organisations operate is characterised by the scarcity of available resources, rising demands from the community for services, and enhanced accountability. The latter arose as a result of Reformasi, commencing in 1998. In this context, the assessment and reporting of performance is crucial to any effort to achieve performance and accountability goals. Therefore, there was a need to adopt new management strategies such as PMS in order to ensure improvement in organisational performance and accountability. This is crucial as the absence of information regarding the results achieved by programs and activities conducted by government agencies would hamper internal continuous improvement and external accountability.

In the last ten years, the Indonesian government has shown strong interest in improving government accountability and performance. This development has been supported by the reform effort in many aspects of management in government

organisations. PMS has been one of the most important fields of reform. The emergence of Inpres No. 7/ 1999 marked the beginning of an important reform effort in Indonesia's public sector.

The enactment of regulation on performance reporting at the beginning of the reform era has marked the introduction of an NPM component (eg. performance measurement) by the Indonesian government. The PMS introduction was undertaken as a response to public demand for productivity, transparency and accountability. This response to public demand is in line with trends in developed countries across the world, wherein performance measurement has become the core of management reform designed to enhance accountability (de Lancer Julnes, 2006).

The Inpres on LAKIP requires government organisations at central, provincial, and local levels to develop performance indicators and prepare annual performance reports starting from the fiscal year 2000. This requirement was based on the premise that the government organisations that have developed performance indicators can improve public policies, service deliveries, and reporting methods to the many stakeholders within their operations.

The benefit of adopting and implementing PMS is hence provided by the utilisation of information collected to assist the decision-making process and to improve internal and external accountability (de Lancer Julnes, 2006). For decision making the measurement of performance indicators is the component that enhances organisational capacity to diagnose many managerial problems and stimulates organisational performance. In regards to enhanced accountability, measurement guarantees the transparency of results and encourages stakeholders' participation both within (internal accountability) and outside the organisation (external accountability). However, prior research revealed that the use of performance indicators has been very limited.

Problems related to the limited use of performance indicators have been discussed in the public sector management literature. This literature focuses mainly on the role of the organisational context as both an enabling and hindering factor. The perceived problems associated with the process of using performance indicators are: 1)

performance indicators have not been developed; 2) performance indicators were developed in a very limited way; and 3) performance indicators were developed but not used or were only partly used. It is therefore crucial to understand the process of developing and using performance indicators to encourage and promote the adoption and implementation of PMS in public sector organisations.

With that in mind, this thesis was designed to contribute to the existing theory and practice of PMS through a comprehensive analysis (using both quantitative and qualitative methods) of the factors affecting the development and use of performance indicators in ILG.

## **1.4 Research Methods**

This thesis employed complementary mixed methods by utilising two data sets gathered through two phases of study (phase 1: survey; phase 2: interviews). Both quantitative and qualitative data required for the analysis were sequentially collected. This approach was selected to ensure that the objective was achieved and all research questions were addressed comprehensively and coherently. The first phase was conducted between August 2008 and February 2009, and the second phase between July and August 2010.

Phase 1 was undertaken using structured closed-ended questions (see Appendix A.4-1) focusing on two main themes: performance measurement and accountability. These themes were selected to examine the perceptions of ILG officials regarding PMS practices. Phase 2 was more unstructured, and focused on the motivation behind the implementation of PMS through interviews (see Appendix A.4-3) to gain more insight into the issues affecting the development and use of performance indicators and accountability practices within the ILG.

### **1.4.1 Research objective and questions**

The objective of this research is to develop a conceptual model that identifies the factors that influence the development and use of performance indicators in ILG. The primary research question is: "What factors affect the development and use of

performance indicators and accountability practices in ILG?" Specifically, based on the research objective mentioned above, this study was conducted to answer the following secondary questions:

- 1) Does ILG develop and use performance indicators?
- 2) Do metric difficulties, technical knowledge, management commitment, and legislative requirements influence the development and use of performance indicators in ILG?
- 3) Do management commitment, legislative requirement, and organisational capacity influence accountability practices in ILG?
- 4) Does institutional isomorphism exist in the development and use of PMS and accountability practices in ILG?

## **1.5 Significance and Contribution of Research**

### **1.5.1 Significance**

Previous studies have claimed that there is a need for more research in the public sector (for example, see J Broadbent & Guthrie, 1992). The reforms imposed on the public sector create an opportunity to study several issues, including the effect of public sector reform at various levels of government. For example, Hoque and Moll (2001, p. 322) studied whether reform in the Australian public sector resulted in a greater efficiency and effectiveness or merely provided a "window dressing" to increase the legitimacy of local government operations. In Indonesia, even though the regulations that require ILG to develop and report performance indicators have been in existence for a decade, there has been little research in the area of performance measurement and accountability.

This research focus has not previously been undertaken in an Indonesian context and hence will significantly contribute to the literature on PMS and accountability within Indonesia's public sector. The role of the researcher, as a former local government consultant, offers a unique perspective and strengthening of theoretical knowledge with working knowledge. Therefore, by conducting this study and identifying the factors that are likely to affect the utilisation of performance indicators, an

explanation of existing practices will be provided. As well, improvement programs can be suggested if required. As claimed by van Dooren (2005, p.363), to set up a performance measurement policy "a good insight into the organisational factors that foster performance measurement is crucial".

The thesis is significant in that it establishes a conceptual platform for examining PMS and accountability practices within ILG in particular as well as the NPM environment in Indonesia in general. Despite a decade of reform efforts, there has been little or no application of the available PMS research by ILG organisations in the development and use of performance indicators. It follows that this research has further significance, in that it recognises the association between the technical and organisational factors affecting the implementation of PMS and accountability and the motivations underlying those factors. The thesis provides a new, improved model with which to test the relative impact of those factors; this model can, in turn, be used in other developing countries. This approach is supported by de Waal (2003) who identified the important role of variables such as organisational factors in affecting the implementation of PMS. Hence, the issues raised in this thesis not only make a significant contribution to ILG, but are also relevant as bases for future research.

### **1.5.2 Contributions**

Academically this thesis makes three major contributions. First, theoretically the study contributes to both the performance measurement and the institutional theory literature by linking the three institutional isomorphism mechanisms—coercive, mimetic and normative—to the factors associated with the utilisation of PMS. Second, methodologically this thesis shows the advantage of using mixed-method research rather than a single research method in the field of public sector management, specifically in the area of performance measurement and accountability. Third, analytically this thesis provides a good example of the utilisation of the two generations of multivariate analysis tools, namely Ordinary Least Squares (OLS) and Partial Least Squares (PLS), to provide assurance of the validity and robustness of the quantitative analysis results.



Practically the explanation of the impact of isomorphism on the implementation process investigated in this study will provide invaluable information to government officials and other interested parties. This study will help them to better understand the institutional pressures experienced by ILG and the potential problems they would face in implementing PMS in their organisations. In addition, in the last decade Indonesian government has adopted financial management and reporting reforms and, like other countries across the world, has embraced the idea of NPM. The results of this study reveal the current progress of the reforms, especially with respect to performance measurement and accountability and, in turn, will form a foundation for further research in the area. In this sense, the study offers insight to many different interested parties, as it presents an overview of ILG's endeavours in implementing PMS and accountability in practice. Many issues emerging from the findings will be of great interest to local and central government, government auditors, and universities and hence will contribute to better future policies and practices within Indonesia.

## **1.6 Limitations of Research Methods**

As in most survey research, there are two methodological issues that may be raised with regard to the use of a survey as the data collection method of this study. First, the choice of Indonesia as the research site may raise questions about the study's external validity, as Indonesia has a unique history, culture, economy, and political environment. Nevertheless, it is not unusual to apply Western theories, especially in the area of management, organisational theory, and organisation behaviour, to non-Western democratic countries (e.g., Kim, 2004; Kim & Lee, 2006).

The second issue is the absence of 'hard' measures of performance such as the actual number and frequency of performance indicators or actual outcomes. Such measures are assumed to be more objective and less biased. For this study such information could not be obtained due to difficulty in gaining the data. However, when such objective performance data are not available or impractical to collect, subjective (perceptual) performance measures may offer a reasonable alternative (Allen & Helms, 2002; Delaney & Huselid, 1996; Dess & Robinson, 1984; Dolinger &

Golden, 1992; Laegreid, Roness, & Rubecksen, 2007; McCracken, McIlwain, & Fottler, 2001; Schmid, 2002; Venkatraman & Ramanujam, 1987).

Therefore, a survey can be seen as a practical alternative to employ in this study. Even though there is inherent bias in self-reported and perceptual measures of performance, there is evidence of a high correlation between perceptual and objective measures at the organisational level. Some studies have found that measures of perceived organisational performance correlated positively to objective measures of organisational performance (Dolinger & Golden, 1992; McCracken, et al., 2001; Powell, 1992; Venkatraman & Ramanujam, 1987). Another study found strong positive correlation between perceptual data and financial performance (Dess & Robinson, 1984).

Finally, the empirical evidence provided is context-specific to ILG as the third tier of government in Indonesia. However, the approach and conceptual analysis have a general validity and hence can be applied in other government contexts for future research.

## **1.7 Organisation of Thesis**

In achieving the goals of the study, this thesis is organised in eight chapters as follows:

*Chapter 1* provides an overall introduction to the thesis.

*Chapter 2* provides a critical review of the most relevant literature in the field of performance measurement and accountability as the theoretical background for the basis of analysis.

*Chapter 3* offers a discussion regarding institutional theory, specifically institutional isomorphism, as the theoretical framework utilised in this thesis. This chapter also presents the proposed conceptual model, along with respective hypotheses, developed to answer the research questions.

*Chapter 4* discusses both the quantitative and qualitative research methods employed. The development of the survey and in-depth interview protocol as

research instruments is also presented and discussed in detail. In the final part of the chapter the procedures of conducting pre-test and pilot studies, along with the results from the pilot study, are illustrated.

*Chapter 5* presents the results of the survey. The first part of the chapter uses descriptive analysis, and the second part applies a first generation multivariate analysis, or OLS. This chapter reveals and discusses the results of hypothesis testing undertaken.

*Chapter 6* provides the results of a quantitative analysis using structural equation modelling, or PLS, as an alternative tool. This chapter also discusses the results of hypothesis testing undertaken using the PLS analysis. The comparison between the results from OLS and PLS analysis is provided and discussed at the end of the chapter.

*Chapter 7* provides the results from the second phase of the data collection, which consisted of face-to-face in-depth interviews of selected respondents. Thematic analysis was used as the analytical tool to analyse the qualitative data gathered from the interviews.

*Chapter 8* concludes the whole thesis and discusses implications of the results found in Chapters 5, 6 and 7. The contributions of the study and potential areas for further research are also considered here.

## **1.8 Chapter Summary**

This chapter provided a brief, yet complete, overview of the structure of the thesis. The research was designed to extend the work of previous studies in the field of performance measurement and accountability by investigating the development and use of performance indicators in the Indonesian public sector. It is expected to contribute to both theoretical and practical aspects of performance measurement and accountability as crucial pillars of both NPM and good governance.

## **Chapter 2: Literature Review**

### **2.1 Introduction**

This chapter presents a literature review on accountability and performance measurement in the public sector within an NPM and good governance environment. This chapter is divided into three main sections. The first section presents the rise of public management reform, in which NPM and good governance are discussed. The second section provides a background to the concept of accountability. Then, in the third, performance measurement in general, and in ILG in particular, is addressed along with an overview of the most relevant literature.

### **2.2 New Public Management and Good Governance**

NPM and good governance are considered as two different but parallel reform movements in the public sector. Both NPM and good governance are concerned with issues around accountability and performance measurement. These issues, when applied to government organisations, should improve the quality of public service delivery (Hartley, 2005).

Since the early 1980s the public sector has experienced significant changes in its management approach. Public organisation management has become more similar to private sector management in many respects (Halligan, 2001). Different economic crises also may have played a role in some of these changes. Kettl (2005) argued that in most OECD nations, governments adopted this new private sector management style in order to better achieve goals with less cost. Kettl (2005, p.60) observed that:

The management reform movement has had a powerful effect on government action throughout the world as nations move into the twenty-first century. The level of activity—from New Zealand’s vigorous efforts to reshape the state to those of many developing countries to accelerate their own transformation—has simply remarkable. Perhaps never before have so many governments tried to change so much so fast in such similar ways

The concept of NPM emerged also in the 1980s to represent these global changes. Management techniques (i.e. performance measurement) used in NPM were mostly

borrowed from the private sector managerial approach. The underlying assumption was that private sector firms were more efficient in their operations than public sector organisations. Proponents of NPM characterised the movement with features such as: 1) greater disaggregation of public sector organisations into small and thus more manageable units; 2) adoption of a measurable standard of performance; 3) enhanced competition; 4) use of private sector managerial techniques; 5) decentralisation of authority; and 6) focus on efficiency (Hood, 1991; Pollit & Bouckaert, 2004).

Following on from the reforms of the 1980s, the concept of corporate governance emerged (Halligan, 2001) with many considering appropriate corporate governance arrangements as a crucial element to public sector management (Barrett, 2003). Agere (2005) stated that good governance has also been seen as a new paradigm in the public sector. Agere (2005, p.1) pointed out that:

as an aspect of the New Paradigm in Public Administration which emphasis the role of public managers in providing high quality services that citizen's value; advocates increasing managerial autonomy, particularly by reducing central agency control, demands, measures and rewards both organisational and individual performance.

In the literature three approaches to innovation in the public sector have been identified and are well-known across the world. Hartley (2005) viewed the three approaches as competing paradigms in public sector innovation. Appendix A.2-2 illustrates the characteristics of the three paradigms to show the changing ideological conceptions of governance and public management in the public sector. Benington and Hartley (2001) presented three paradigms, which may be linked to a particular historical period, of governance in the public sector. Each paradigm contains particular assumptions about the nature of the world. These include assumptions on context, population, problems/needs, strategy, actors, and key concepts. The most important difference is in the way these three paradigms view the product of public organisation. In the traditional administration's view, a public agency is responsible for public goods. However, in NPM and good governance, a public organisation is assumed to create public choice and public value, respectively.

Since the post-war period there has been an increase in innovation in the public sector under the combined umbrella of traditional public administration, the NPM movement, and the good governance framework (Hartley, 2005). At the end of the 1970s the traditional public administration paradigm gave way to these new concepts. During the early 1980s the NPM paradigm emerged and dominated public sector reform for more than two decades. The public sector around the world has been continuously changing, whilst experiencing volatile and complex problems coupled with increased risk. These changes saw a shift of strategy in governance from a market orientation towards more collaborative partnerships. The collapse of some prominent private sector corporations in recent years has been seen as the emerging pretext for the adoption of the good governance paradigm (Shipley & Kovacs, 2007). Within the public sector there was a shift of focus from the NPM components to a corporate good governance approach (Kluvers & Tippet, 2010). This approach placed citizens and partnerships at the centre of the governance framework. In a manner similar to NPM, good governance focuses on accountability and outcome-based public services deliveries (Olson, 2000).

Many international institutions such as the United Nations Development Programme (UNDP), the World Bank, and the United Nations Centre for Human Settlements (UNCHS) have identified the characteristics of good governance, as presented in Table 2.1.

**Table 2.1: Principles of Good Governance**

UNCHS	UNDP	World Bank
Decentralisation	Participation	Participation
Equity	Equity	
Transparency	Transparency	Transparency
Accountability	Accountability	Accountability
	Rule of law	
Citizenship	Responsiveness	Sensitivity
	Consensus	
Efficiency	Efficiency and effectiveness	Cost Effectiveness
Strategic vision	Strategic vision	
Sustainability		
Security		

*Source: Agere (2005)*

Despite slightly different views, UNCHS, UNDP and World Bank share common characteristics in regard to the principles of good governance. The shared key elements of good corporate governance are: 1) transparency, 2), accountability and 3) efficiency and effectiveness. As can be seen from its components, NPM and public sector corporate governance are closely related to each other. Accountability is a core component of both corporate governance and performance measurement. Performance measurement, in turn, is an important element of NPM and is seen as a means to discharge accountability. Therefore, this study focuses on these two pivotal aspects of reform in the public sector—accountability and performance measurement.

### **2.3 Accountability**

Accountability is a complex and elusive concept. In different contexts it can present different meanings. Despite its complexity, accountability is an attractive term and many people from practitioners and academics to politicians frequently use it. In the modern era there is no argument regarding the need for accountability in any society across the globe. Accountability has even been considered to be one of the cornerstones of good governance (Sheehan, 1996). When it comes to defining accountability, however, scholars have offered diverse approaches, conceptions, and ideas.

Originally, the word "accountability" came from the old French "compter" or "conter", which means "to count" or to "enumerate" (Matek in Cutt & Murray, 2000, p.3). According to the Concise Oxford Dictionary (1989), someone is accountable when they are responsible and bound to give account. Further, to account means to "discharge of any responsibility; answering for conduct" (1989, p.7).

In organisational studies the word "accountability" has a complex and multifaceted meaning. No single definition has been generally approved and accepted by scholars. However, the basic notion of accountability is that "those acting on behalf of another person or group, report back to the person or group, or are responsible to them in some way" (Hughes, 2003, p.237). The essence of accountability is the obligation to

render an account for a responsibility that has been given (Cutt & Murray, 2000). Glynn and Murphy (1996, p.127) defined accountability, in a broad sense, as "the process via which a person or group of people can be held to account for their conduct", whilst Hyndman and Anderson (1995, p.10) defined accountability as follows:

Accountability involves explaining or justifying what has been done, what is being done and what has been planned. Thus one party is accountable to another in the sense that one of the parties has a right to call upon the other to give an account of his activities.

Boland and Schultze (1996, p.62) state that accountability is concerned with giving explanations through a "credible story of what happened, and a calculation and balancing of competing obligations, including moral ones"; Hoskin (1996, p.265) described accountability as:

more total and insistent...accountability ranges more freely over time and space, focusing as much on future potential as on past accomplishment, connecting and consolidating performance reports to plans and forecasts.

Given the complex nature of accountability, one strategy to better explain the subject is to break it down into smaller topics. By doing that, complex and elusive concepts become more manageable and therefore easier to understand. Many authors have proposed their views with regard to the elements of accountability.

### **2.3.1 Five forms of accountability**

In her study on forms and discourses of accountability, Sinclair (1995) found different forms of accountability. The study shows that accountability exists in many forms and has an extra dimension of meaning according to its context. Sinclair considered five forms of accountability: 1) political accountability; 2) public accountability; 3) managerial accountability; 4) professional accountability; and 5) personal accountability. Although Sinclair's analysis does not provide the basis for this thesis, a brief explanation of each of the forms is provided as background to the definition adopted.



### *Political accountability*

This concept comes from Athenian democratic and Westminster traditions. Here, public servants exercise authority on behalf of elected representatives, who are in turn directly accountable to the people (Day & Klein, 1987). In a democratic government, instead of being directly accountable to the people, the executive officials formally discharge their accountability to politicians in parliament as representatives of the people.

### *Public accountability*

In addition to the indirect type of accountability discussed in political accountability, public servants can also choose to explain the responsibility of the public organisations they manage directly to the stakeholders. Various mechanisms are available to account for an organisation's policies and activities such as public hearings, provision of government reports in the media (i.e. newspaper), or even via real time communication tools (i.e. hotline number) that enable people to communicate with government officials easily and instantly.

### *Managerial accountability*

An accountability relationship is also found inside the organisation itself. This managerial accountability concept calls lower level officials to account to superior-level officials for the performance of delegated duties.

### *Professional accountability*

This concept "invokes the sense of duty that one has as a member of a professional or expert group, which in turn occupies a privileged and knowledgeable position in society" (Sinclair, 1995, p.229). In this sense, government employees and officials are supposed to act and behave professionally to provide the best service they can provide for the benefit of the stakeholders, based on the skills and expertise they have.

### *Personal accountability*

This concept relates to individual accountability and points to the ultimate form of accountability. Here, accountability rests on personal adherence as the logical consequence of the internalisation of moral and ethical values. This type of accountability involves human relationships such as respect for human dignity, and implies acting in a manner that accepts responsibility for affecting the lives of others (Harmon & Mayer, 1986).

Accountability has many other meanings and is usually used in association with other words such as responsibility, responsiveness and answerability. However in a governmental context, it is used in relation to two different, but closely related, domains. The first is the domain of political accountability, and the second is the domain of managerial accountability (Day & Klein, 1987; Gregory, 2009; Hughes, 2003). Table 2.2 presents a matrix on domain of accountability.

**Table 2.2: Political and Managerial Accountability**

	Domain	
	Political	Managerial
Prospective	Election promises and manifesto	Strategic and organisation plan
Retrospective	Explanation and justification	Reporting and Recording

*Source:* (Gregory, 2009)

The first domain focuses on the mechanism of balancing power within liberal-democratic systems to prevent authority holders from abusing the power in their hands and, at the same time, to maintain organisational legitimacy over time. This balance of power is necessary to achieve organisational effectiveness. Despite exercising the same formal powers of office, some presidents, for instance, have been more effective than others in maintaining his/her legitimacy in the eyes of the citizen (Neustadt, 1990). For example, a President may use electronic media such as television network or internet to build a good image of his/her leadership. The key to this success is their ability to maintain a balance between the force of authority and their legitimacy, as state sovereignty ultimately depends upon the citizen (Gregory, 2009).

The second domain is about ensuring that organisations operate in a manner that is consistent with key values such as fairness, impartiality, efficiency, economy, and effectiveness (Gregory, 2009). Thus, managerial accountability is concerned with the internal relationship between subordinate and superior within a certain organisation. An effective accountability relationship within an organisation is needed to determine organisational success in achieving its goals. In other words, political accountability focuses on the ways in which those who exercise the authority of the government are prevented from abusing it. Managerial accountability, in contrast, focuses on ensuring that governmental organisations actually operate properly in achieving goals that are in the best interest of their stakeholders (Gregory, 2009).

Broadbent and Laughlin (2003) proposed two similar forms of accountability, namely: 1) public/political accountability that involves the public as the principals and is concerned with issues of democracy and trust, and 2) managerial accountability that is concerned with day-to-day operations of the organisation.

In the United States of America (USA), the Government Accounting Standards Board (GASB) also acknowledges the existence of several accountability issues and limitations in the document "Concepts Statement No.1: Objectives of Financial Reporting for State and Local Governments" (GASB, 1987).<sup>10</sup> Those issues include:

- (1) The term *accountability* is used extensively...but suffers from imprecise meaning (Para. 80);
- (2) An accountability perspective in financial reporting complicates the cost-benefit analysis of information (Para. 73);
- (3) Users of state and local government financial reports are diverse...it may be impossible to provide information in any one report sufficient to meet all the needs of all users (Para. 72); and

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<sup>10</sup> Source: [www.seagov.org](http://www.seagov.org)

- (4) Financial reporting is only one source of information...users ...combine the information provided by financial reporting with other pertinent information (Para. 71).

In constitutional government systems, there are two types of accountability, namely: 1) internal accountability, which is a more direct type of accountability that applies within a certain organisational system and involves direct reporting by subordinates to a superior who holds the power of direct action, and 2) external accountability, which is an indirect type of accountability, involving reporting to parties outside the organisation (Matek, 1977). Leclerc, Moynagh, Boisclair, and Hanson (1996) defines internal accountability as a rendering of account within a management hierarchy from the lowest echelon to the top, and external accountability as the accounting managements provide to their governing bodies who serve as owners on behalf of the public.

It is obvious that accountability has multiple meanings depending on the context. Given the lack of consensus on the meaning of accountability, and to make it clear and operational for ILG, this thesis—following Matek (1977) and Leclerc et al. (1996)—was concerned with trying to understand the concept from the respondent's point of view. In this context, accountability is categorised here as:

- (1) *Internal* accountability, which is the accountability of SOs (the highest level of appointed official in local government) to the major/head of district (elected official). According to Meijer (2003), internal accountability exists within the bureaucracy of the organisation. For example, the general manager in a local authority is answerable to the elected council members. Internal accountability refers to the relationship between superiors and subordinates within an organisation (Stewart & Walsh, 1994).
- (2) *External* accountability is the accountability of local government entities to their stakeholders such as central government, parliaments and citizens. External accountability operates when public organisations give an account to, and are held accountable by, external individuals or agencies (Boyne, Gould-Williams, Law, & Walker, 2002).

Therefore, it is important to note that for the rest of the thesis, when discussing accountability, this study is using these two categories—internal and external accountability.

### **2.3.2 Government and accountability**

The movement towards NPM in the latter part of the twentieth century broadened the dissemination of the concept of accountability. The level of public and academic debate regarding accountability, along with related ideas such as efficiency and effectiveness, has been increased, especially in the Western countries—New Zealand, Australia, Britain and USA. During the last three decades notions of public sector accountability have become widely used, with formal systems of accountability being built into rules and legislation for government entities (Fowles, 1993; Hyndman & Anderson, 1995).

During the reform era, the increasing lack of trust in Indonesian government organisations at every level and the continued concern about the public money they spent led to an emphasis on the issues of government accountability. Hence, accountability has been a central issue for reformers. With the onset of reform, government entities have a responsibility to report to central government (vertical accountability) and also to the local community (horizontal accountability) via DPRD<sup>11</sup> (Mardiasmo, 2002).

There have been considerable changes in accountability mechanisms as NPM has advanced. Reporting performance via performance reports to stakeholders has been given priority. These reports have been considered as the forefront of accountability innovation in the sector public in developed countries (Christensen & Skaerbaek, 2007). Important aspects of local government accountability to central and local stakeholders are measured by using performance indicators provided within an annual performance report. In Indonesia, performance measurement has also been seen as an essential part of public sector management reform (Podger & Perwira, 2004).

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<sup>11</sup> Elected local people's representatives

Accountability in local government is provided by the use and publication of both financial and non-financial performance indicators. Performance indicators play a significant role in managerial or internal control in ensuring that organisations are managed in the best interests of all stakeholders. In this sense the focus is on the issue of internal accountability within individual organisations. In addition, many believe that performance measurement is important to demonstrate both external and internal accountability (Kloot, 1999; McPhee, 2005; Tilbury, 2006). Cameron (2004) argues that the reporting of performance information is fundamental to government organisation accountability.

To summarise, there is a requirement for government organisations to account for their actions to stakeholders. In other words, government organisations have the obligation to discharge accountability through the provision of performance information. Therefore, this performance-based accountability process requires a performance measurement system that is capable of producing information about an organisation's outputs and results as measured against its pre-determined goals and objectives. This information is crucial in enhancing both internal and external accountability.

## **2.4 Performance Measurement**

Performance measurement has been a matter of interest to public sector organisations around the world. It has been claimed that performance measurement offers a solution to the problem of containing public expenditure and improving service delivery to users (Pollitt & Bouckaert, 2004). Performance measurement puts emphasis on the management of results and the ability to measure public organisations on the basis of an input-output (outcome) model (Johnsen, 2005).

In Indonesia, interest in performance measurement was demonstrated when President Habibie signed Presidential Instruction No.7/1999 regarding performance reporting for government organisations. This act was seen as an appropriate response to improve government performance and accountability as required by the reform movement. The enactment of this regulation followed the path of other countries

such New Zealand, Australia, the USA, Canada, and countries of Western Europe where similar legislation can be found at the national or state (provincial) level (Halachmi, 2002).

Over the last three decades the idea of performance measurement has been the focus of considerable attention from both academics and practitioners (Armstrong & Overton, 1977). Initially, research in the field mainly concentrated on performance measurement in the private sector (Chenhall & Smith, 2007; Hussain & Hoque, 2002; Johnson & Kaplan, 1987; Kaplan, 1983). However, a substantial number of studies have addressed issues of performance measurement in the public sector (Yang & Hsieh, 2007; Cavalluzzo & Ittner, 2004; Hood, James, Jones, Scott, R Travers, 1998; Smith, 1995). Public sector organisations, particularly governments in Western countries (e.g. Australia, United Kingdom (UK), USA and Canada) are using performance measurement in their efforts to improve organisational management and provide the best possible value to taxpayers.

In Western countries, the need for better performance from government organisations is unavoidable. Ingraham (2005) points out that the issue of performance has gained increasing popularity in nations around the world. However, performance is also a hard-to-define term and like accountability has multiple meanings. Dubnick (2005, p.391) stated:

Outside of any specific context, performance can be associated with a range of actions from the simple and mundane act of opening a car door to the staging of an elaborate re-enactment of the Broadway musical "Chicago". In all these forms, performance stands in distinction from mere "behaviour" in implying some degree of intent.

Government provides a broad range of services to its stakeholders, including ones that are uneconomical for private firms to provide. Building and maintaining waste management systems are examples of services that government usually has to provide. No other firms are willing to undertake these tasks because the costs are very high, sometimes making it very difficult to achieve a profit.

Unlike profit-oriented firms in the private sector, which emphasise financial targets, government organisations as not-for-profit entities have multiple goals to provide services to diverse stakeholders. Free-market competition that triggers organisations to improve efficiency also does not exist in government contexts. Consequently, assessing government performance merely on the basis of efficiency is not only inappropriate but also misleading as the financial aspect is not the ultimate goal of public sector organisations.

Performance measurement for governments is defined as "regular measurement of the results (outcomes) and efficiency of services or programs" (Hatry, 2006, p.3). The relationship between the amount of input required and the amount of output produced is measured in terms of "efficiency", whilst the impact and quality of the service delivered is measured by "effectiveness". In other words, efficiency is doing something with the least possible expenditure of resources (such as time, energy, etc.) and effectiveness is doing it well, doesn't matter what it takes (Drucker, 1994). Osborne and Gaebler (1992) claimed that to win public support, government officials need to demonstrate the results achieved. Managing and measuring performance has been one of the key drivers in the reform of the public sector. It is one of the "central planks of the reinventing government movement" (Gianakis, 2002, p.36). From this, one could ascertain that local government should manage and measure its performance using PMS in order to better serve the citizens and in turn gain their support.

In an era of increasing decentralisation and autonomy, ILG is under more pressure for delivery and performance of their public services than ever before. As the form of government that is closest to the people, it has been recognised as the sphere of government that has the largest capacity to deliver real outcomes at a local level (LOGOTRI, 2003).<sup>12</sup> This development, in turn, should increase the quality of life for its citizens. In order to do this, however, local government must have some way of measuring the success, failure, and progress achieved in the pursuit of the objectives. Increasingly, performance measurement has been considered a vital tool

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<sup>12</sup> The Network of Local Government Training and Research Institutes in Asia and Pacific



for local government to not only measure its activities, but also to then provide feedback into the management process to help improve future performance (LOGOTRI, 2003). Further, the development and use of performance measures is considered a key element of NPM implementation (Lapsley, 2008).

Within the Westminster system, executives have the responsibility of developing and implementing performance policy (Kettl, 2005). If there is something wrong, top executive management are considered to be responsible. Consequently, the legislative branch and the voters have the right to be informed about the actions of executives (Fountain, 1991). Patton (1992) argues that, unlike in the private sector where investors have free access to capital markets, in the public sector voters do not have the freedom to choose between alternative entities. Therefore, it is even more important for stakeholders to be able to make informed judgments about the performance of public sector organisations. Thus, performance reporting by public sector organisations such as local government is crucial to the accountability relationship with external stakeholders.

## **2.5 Performance Measurement Systems**

This section provides a review of relevant previous studies on PMS and accountability as a base in designing this thesis. Given the large numbers and diverse approaches of studies conducted in this field, the focus of the review was directed and limited to the literature that was relatively close to the approach of this thesis. In this section some findings, along with the strengths and weaknesses of relevant prior studies, are briefly reviewed.

Wang (2002) conducted a study regarding public accountability in government. This study provided the results of a national survey on accountability practices in U.S. municipal administrations. It examined possible causes and effects of accountability and found that city administrations used a variety of political and legal accountability tools. City administrations revealed more financial information than performance information to their stakeholders. Some factors revealed in the study had association with accountability (e.g. government workers' concerns about exposing their performances, responsiveness, public consensus, and stakeholder trust), whilst the

other factors under examination (e.g. stakeholder fiscal commitments and administrative service capacities) were not associated with accountability. Wang's study was relatively strong in terms of methodology as it employed a combination of survey and follow-up interviews. However, it targeted only city administrations. Generalisation of Wang's findings to other levels of government should be undertaken with caution.

In his study Ho (2005) tried to answer a fundamental question, "Does performance measurement matter?" by examining how and why Midwest mayors perceive value in performance measurement. The study found that although the tool is perceived positively, its impact on decision making depends on whether performance measurement is integrated into strategic planning, goal setting, and internal communication between city council members and departmental staff, and on whether major stakeholders are involved in developing performance indicators. Ho's study, like many others, used a survey as the data collection method. However, to compensate for any potential limitations of the survey, fourteen follow-up interviews were conducted. Like Wang's study, this study was relatively strong in terms of the method used as it employed a combination of survey and follow-up interview.

There are, in practice, many different uses of performance information. In organisational literature the uses of performance information, such as strategic planning, budgeting, and accountability reporting, are examined (see Appendix A.2-1 for further list). These studies were significant in providing the basis for future research focusing on performance measurement – as this thesis does.

Various studies of the local government use of performance measurement suggest that the practice of collecting performance measures, at least at a rudimentary level, is fairly well established in many countries, including the USA, the UK, and Australia. According to Behn (2003, p.586), "everyone is measuring performance". Despite this growing practice previous studies found that the development and use of performance measurement in the public sector is problematical.

One study conducted in Australia revealed that there are indications that the use of performance measures is not as extensive as is theoretically possible (Bellamy &

Kluvers, 1995). The findings of the survey and case study conducted by Bellamy and Kluvers confirmed what has been found by other researchers (for example, Ammons, 1995; Midwinter, 1994): that few local governments are using performance measures. A decade after Bellamy and Kluvers' study, more evidence of the use of performance indicators was found by Pilcher (2005) through her study of local government key performance indicators in New South Wales Australia, where it was determined that not all performance indicators met the original goal of accountability.

In their study on usefulness and adoption of performance information in the Australian public sector, Lee and Fisher (2007) found that most types of information were regarded as having some degree of relevance to performance measurement for particular decisions. Nevertheless, it was found that the actual use of performance information did not match the level of its perceived usefulness. Similar results were found by Hatry (2002) and Ammons and Rivenbark (2008) in the United States.

In regard to factors influencing the use of performance data, Ammons and Rivenbark (2008) found that many local governments measure and report their performance, but the record of these governments in actually using performance measures to improve services is more modest. The survey responses and supporting material revealed extensive use in some cities, showed less use in others, and suggested possible factors influencing the difference. The strength of this study was in the multi-method data collection approach used. Hence it eliminated some of the weaknesses inherent in single method research.

Some previous studies have investigated the factors influencing the use of performance measures in the public sector to obtain an explanation for the implementation of PMS (for example, Ammons & Rivenbark, 2008; Cavalluzzo & Ittner, 2004; de Lancer Julnes & Holzer, 2001; Johnsen, 2005; Moynihan & Pandey, 2004; van Dooren, 2005; Yang & Hsieh, 2007). Some of the essential factors found to be associated with the use of performance measures included measurability, management commitment, technical knowledge, environmental pressures, and organisational scale. These factors will be further investigated in this study. Along with the investigation of these factors influencing the use of performance

measurement, this study will examine the actual practices of performance measurement for both internal management use and external accountability reporting.

Cavalluzzo and Ittner (2004), for example, studied the factors influencing the implementation of PMS in government. They examined some of the factors affecting the development, use, and perceived benefits of results-oriented performance measures in government activities. It was found that organisational factors such as top management commitment to the use of performance information, decision-making authority, and training in performance measurement techniques have a significant positive effect on measurement system development and use.

Cavalluzzo and Ittner (2004) also found that technical issues, such as information system problems and difficulties selecting and interpreting appropriate performance metrics in hard-to-measure activities, play an important role in system implementation and use. The extent of performance measurement and accountability are positively associated with greater use of performance information for various purposes. However, Cavalluzzo and Ittner found relatively little evidence that the perceived benefits of recently mandated performance measurement initiatives in the US government increase with greater measurement and accountability. Their study provides exploratory evidence that some of the technical and organisational factors interact to influence measurement system implementation and outcomes, often in a complex manner. However, the use of a survey as the only data collection approach suggests the limitations of their study.

Wang and Berman (2000) investigated the prevalence of performance measurement in US counties. Their study focused on organisational relationships, structures, and goals that are relevant to theories of management reform in government. It found that legislative and citizen support, the active involvement of central management, and mission orientation further the deployment of performance measurement. The use of a survey as the sole approach of data collection placed some limitations on the validity of their study results.

De Lancer Julnes and Holzer (2001) conducted research into the factors influencing the implementation of PMS with emphasis on the factors that affect the utilisation of performance measurement, specifically on the adoption (development of indicators) and implementation (actual use of indicators). Their findings indicated that policy adoption is driven more heavily by factors emerging from rational and technocratic theory, whereas actual implementation is influenced by factors addressed by political and cultural considerations. Recognising the two stages (adoption and implementation) of performance measurement utilisation is one of the strengths of the study. However, as in the Wang and Berman (2000) study, their methodology was limited to the use of survey data.

Yang and Hsieh (2007) studied the adoption and effectiveness of performance measurement in Taipei, the capital city of Taiwan. This study used a survey instrument as the data collection method. It used structural equation modelling (SEM) to test a model that assessed the relationship among factors related to performance measurement adoption and effectiveness. The factors under examination included the political environment, stakeholder participation, organisational support, training, the adoption of performance measurement, and the managerial effectiveness of performance measurement. They found that external political support affects performance measurement's managerial effectiveness both indirectly (through external stakeholder's participation, organisational support, and technical training) and directly. It also affects adoption indirectly (through organisational support, and technical training). Providing a middle-range theory test utilising SEM was the particular strength of this study, given the scarcity of theory construction in the field. However, using a mailed survey as the only data collection approach suggests the study's main limitation.

Finally, Tooley et al. (2010) conducted a study on performance measurement and accountability in Malaysian local authorities focusing on the stakeholder's need for performance information. Using relevant data obtained from a survey the Tooley et al. (2010) study focused on the scope, nature, and importance of performance information in discharging public accountability. They found that stakeholders view non-financial performance and future-oriented information as more important than financial performance in discharging local authorities' accountability.

In summary, many past studies focused on how performance measurement and accountability were integrated. Unfortunately, most of them were conducted in developed countries and mainly in Western countries. Despite the importance of performance measurement as a pillar of accountability in the reform era, literature concerned with this issue is still very rare in a developing country such as Indonesia.

## **2.6 Performance Measurement Systems in Indonesia**

Since 1999, performance measurement has become increasingly important in Indonesian government especially at the local government level. Performance measurement, in its simplest terms, means obtaining information useful to someone in assessing how well an organisation, program, or activity is working. Deciding what should be measured in performance measurement is essential, but is not easy.

Following the emergence of the reform era in 1998, the public began to demand more transparency and accountability from government. During this era, the role of ILG was an important one given decentralisation had become the main pillar of Indonesian reform. Therefore the role of local government is crucial in providing information regarding government accountability. One important element of the accountability process, which is widely recognized, is performance reporting (Tooley, Hooks, and Basnan, 2010). The public require performance information so that they can make informed decisions and gain a clearer understanding of government performance.

To measure performance several questions need to be addressed. These questions include: 1) what is the entity (activity, program, or organisation) whose performance is to be measured; 2) who is the user of performance information; and 3) what is the purpose of using performance information? Once these questions are answered, the local government official charged with the task of developing performance indicators is ready to consult the relevant specific guidelines provided by central government, or other general guidelines on performance measurement, for assistance in deciding what to measure.

Unfortunately, in the implementation process different guidelines provided by the Ministry of Finance Affairs (MoFA) and Ministry of Home Affairs (MoHA) caused more confusion. The MoFA put more emphasis on financial performance whilst MoHA is more concerned with program performance. No single set of guidelines currently exists for Indonesian local government that has been generally accepted as being the best for performance measurement. From time to time scholars who are concerned with this issue have suggested various different measurement categories that can give direction to performance measurement data collection efforts. The categories most commonly used by a number of scholars are listed in Table 2.3.

**Table 2.3: Types of Performance Categories**

Academic Researchers	Performance Categories								
	Input	Workload	Process	Output	Quality	Outcome	Efficiency	Effectiveness	Productivity
ICMA (1958)	X					X	X	X	
Altman (1973)		X		X			X	X	
Wu (1973)	X			X		X	X	X	X
Cadoo (1976)	X			X			X	X	X
Bahl & Burkhead (1977)	X	X	X	X					
Hatry (1980)	X	X		X	X				X
Hudson & Shephard (1998)	X		X			X	X		
Ostrom et al. (1999)	X			X		X	X	X	
Wholey (1999)		X	X			X		X	

Different categorisations found in the literature are not the only problem creating confusion. A given label for measurement categories may not refer to the same concept when used by different writers. For example, "workload measure" most commonly refers to quantifying the amount of work done. Others say that workload measures describe the type of services requested and the amount of work required to deliver them, and note that workload will not equal output. Further confusion comes from different labels being given to the same concept. Some use different terms to refer to the same concept (i.e. final output/outcome/impact).

In Indonesia, in times of reform and tight budgets, ILG is being asked to do more with less. In addition they must justify expenditures on their programs compared

with planned targets by demonstrating the results achieved for their stakeholders (i.e., local representatives (DPRD), local citizens, higher level governments, NGOs and the media). Performance measurement is typically a continuing activity intended to measure and monitor progress towards predefined goals. It periodically provides ILG with insight into how programs contribute to their goals and in turn how to improve the performance of the programs.

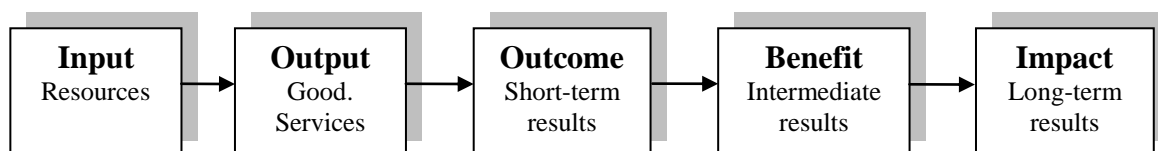
Performance measurement involves measuring program activities and results. Specific performance indicators are internally generated with written general guidance provided by central government. PMS guidelines based on SK Kepala Lembaga Administrasi Negara (LAN)<sup>13</sup> No. 239/IX/6/8/2003 have provided a model (see Figure 2.1) to clarify the expectations of program managers and other stakeholders about how the program is supposed to work, and through what mechanism and by what means the intended results will be achieved. This model was developed to help communicate program intentions to executives and legislators. It ensures a reasonable level of agreement among stakeholders regarding expectations for the program, and identifies and develops the performance indicators needed to assess the program's results.

The LAKIP model uses the following performance categories to assess government entity performance: input, output, outcome, benefit and impact. These guidelines were provided to avoid the confusion referred to above. Table 2.4 presents the definition for each category. The first three categories of LAKIP indicators are quite popular in the literature, whilst the last two are rarely found in the literature. However, these types of indicators basically are only an extension of outcome indicators. In other words, LAKIP categorises outcomes into three different time frames, namely: 1) direct outcome labelled as outcome, 2) intermediate outcome labelled as benefit, and 3) final outcome labelled as impact.

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<sup>13</sup> State Administration Institute





**Figure 2.1: LAKIP Model**

The LAKIP model identifies the needed program inputs (such as staff, financial and other resources); the kinds of activities carried out (where and by whom); and the results those activities are supposed to achieve. The results are assessed in different steps: output; outcome; benefit; and impact. Outputs are the goods and services—the direct results of the activities. Outcomes refer to the short-term benefit of the programs, whilst benefits describe the medium-term impact of the program. Impacts are the long-term benefit of the programs—the program’s ultimate benefits to society. To measure the level of achievement of programs, both quantitative and qualitative performance indicators need to be developed.

**Table 2.4: Types of Indicators**

Indicators	Descriptions
Input	Anything needed to enable programs to achieve results (i.e. human resources, materials, and technology)
Output	Direct results from undertaking activities/programs (i.e. goods and services)
Outcome	Anything that reflects the functioning of outputs of activities (i.e. customer satisfaction)
Benefit	The benefit of output received by the society (i.e. public/citizen satisfaction)
Impact	The level of social, economic, environmental and other public interest influences resulted from programs (i.e. achievement of social objectives)

## 2.7 Summary

This chapter presented an overview of public sector reform across the world. In doing so, the notion of NPM and good governance has been presented concurrently with background information on the emerging practices of performance measurement and accountability in ILG. A gap in the literature was identified, which this thesis fills. This discussion has set the contextual background for the thesis, including the

development of a critical model. The next chapter will discuss institutional theory, the conceptual framework, and hypothesis development.

It was also found that the ILG mainly provides indicators on inputs (i.e. money spent), which are relatively easy to access. Despite their important role, however, information on outcomes ( i.e. program achievement) has not been sufficiently provided with indicators being difficult to develop.

## **Chapter 3: Theory, Conceptual Model, and Hypothesis Development**

### **3.1 Introduction**

This chapter presents important aspects of the theoretical framework, the conceptual model, and the hypotheses development used in this thesis. The chapter starts by considering the theoretical background of this thesis (Section 3.2). The use of institutional theory—particularly the concept of institutional isomorphism—and a discussion of prior studies using isomorphism are presented in the next two sections (Section 3.3 and 3.4). Sections 3.5 and 3.6 provide information on the thesis' proposed conceptual model and hypotheses development. Finally, a summary (Section 3.7) is presented to conclude the chapter.

### **3.2 Theoretical Background**

A number of researchers have studied why organisations develop and apply PMS, by examining various theories such as agency theory, legitimacy theory, the political economy of accounting theory, and stakeholder theory (Johnsen, 2001; van der Laan, van Ees, & van Witteloostuijn, 2008; Wilmshurst & Frost, 2000). In agency theory, the relationship between the two parties (principal and agent) is contractual in nature. The agent is rewarded for its performance according to the contractual terms specified by the principal. In other words, an agent reacts to the requirements of the principal. Similarly, legitimacy theory contends that an organisation responds by disclosing performance information according to the perceived importance of the stakeholder. The public sector context is not contractual in nature. This explains why much of the research applying agency theory has been conducted in private sector organisations rather than in public sector organisations (Johnsen, 2001). There traditionally are multiple principals in the public sector. An agent has to deal with different principals simultaneously. As a result it does not appear easy to measure performance, and research has tended to use indicators drawn more the political economy. Stakeholders' theory also acknowledges the impact of multiple stakeholders on organisational responses to providing performance indicators. In general there is a common thread among these theories.

However, a unanimously accepted theoretical framework for PMS in developing countries does not appear to exist—a fact that makes this thesis even timelier. It has been claimed that stakeholder theory, legitimacy theory and political economy theory are neither separate nor competing (Gray, Kouhy, & Lavers, 1995), and this claim has been supported by Deegan (2007) who suggests that legitimacy theory is a positive theory. Deegan finds many similarities between stakeholder theory and legitimacy theory. Both theories examine the interaction between an organisation and its different stakeholders. An organisation conducts a legitimating activity (i.e. reporting performance indicators) which is valued and demanded by different stakeholders. These two theories are largely overlapping (Deegan & Blomquist, 2006), however, they are different in regard to issues of resolution. Stakeholder theory focuses on how an organisation interacts with particular stakeholders, whilst legitimacy theory focuses on the interactions of the organisation with society as a whole.

An alternative theory advocated by Deegan (2007), institutional theory, has similarities with legitimacy theory in permitting an understanding of how organisations recognise and respond to changing social and institutional pressures and expectations. Specifically, Deegan (2006, p.305) stated:

Among other factors, it links organisational practices (such as accounting and corporate reporting) to the values of the society in which an organisation operates, and to a need to maintain organisational legitimacy. There is a view that organisational form of homogeneity—that is, the structure of the organisation (including the structure of the reporting systems) and the practices adopted by different organisations tend to become similar to conform to what society, or particular powerful groups, considers to be ‘normal’. Organisations that deviate from being of a form that has become ‘normal’ or expected will potentially have problems in gaining or retaining legitimacy.

From the above explanation, it seems clear that the central issue in gaining legitimacy is homogenisation towards and conformance with social values and norms. These aspects of organisational practice are considered essential for social acceptance by society. The two sources of legitimacy emerge from internal

organisational factors and external stakeholders' influence (Lodhia, 2008). The features of institutional theory are further discussed in the following section.

### **3.3 Institutional Theory**

As a theoretical framework, institutional theory is a very broad concept and has many strands that have evolved since the development of the theory in the early twentieth century. Institutionalism in organisations has a long history; the foundation of early institutionalism (old institutionalism) and its application to organisations has been outlined by Selznick (1948). In contrast, modern institutionalism (new institutionalism) emerged in the 1970s, as has been shown in the work of Silverman (1971). Meyer and Rowan (1977) and Zucker (1977) further extended the ideas Silverman proposed.

Selznick, as a supporter of the old model of institutionalism, claimed that institutionalisation is a process that added value beyond the technical requirements of tasks (P. Selznick, 1957). He further described organisations as rational systems that act through their leadership and membership to achieve objectives in an efficient manner. Conversely, the supporters of the new institutionalism, which focuses on a sociological approach, emphasise that organisations operate in a symbolic matrix of practices in order to obtain legitimacy (DiMaggio & Powell, 1983). However, not all institutional theorists agree with this distinction. Selznick (1996), for instance, claimed that the new institutionalism is simply a continuation of the old institutionalism, as the similarities outweigh the dissimilarities.

In the field of organisational study, the concepts of institution and institutionalisation have been defined in many different ways (Scott, 1987). Scott (1987) proposed four formulations for institutional focus. They were institutionalisation as: 1) a process of instilling value; 2) a process of creating reality; 3) a class of elements; and 4) distinct societal spheres. Institutionalisation as a process of creating reality is relevant for this study as this form of institutional theory is based on a shared social reality, which in turn creates a human construction in social interaction. In other words, organisations operating in the same field react similarly and, over time, develop similar responses

or adopt similar practices when facing certain situations. Scott (1987, p.496) defined institutionalisation as:

The social process by which individuals come to accept a shared definition of social reality— a conception whose validity is seen as independent of the actor's own views or actions but is taken for granted as defining the "way things are" and/or the "way things are to be done".

With regard to institutionalisation, DiMaggio and Powell (1983, p.147) made the following comment: "institutionalisation is a rational response; one of the key outcomes of institutionalisation is a homogeneous organisational structure". DiMaggio and Powell (1983) contended that an organisation becomes increasingly similar to others in the same field, as the result of isomorphic power rather than market power. This statement was given in response to previous opinions, such as that of Weber (1952), who suggested that the engine of organisational rationalisation came primarily from the competitive marketplace. According to Weber (1952) there are three related factors that cause rationalisation: 1) competition among capitalist firms, 2) competition among states, and 3) bourgeois demand for equal protection under the law. The first factor was the most important for Weber. Conversely, DiMaggio and Powell argued that the cause of organisational rationalisation has changed. DiMaggio and Powell wrote (1983, p. 147):

Bureaucratisation and other forms of organisational change occur as the result of processes that make organisations more similar without necessarily making them more efficient.

The study by DiMaggio and Powell then sought to explain homogeneity among organisations. They proposed that over time, in a well-established field, organisations tend to move towards homogenisation, even though they show considerable diversity at first. DiMaggio and Powell (1983, p. 148) claimed:

Once disparate organisations in the same line of business are structured into an actual field (as we shall argue, by competition, the state, or the professions), powerful forces emerge that lead them to become more similar to one another.

The term used that best describes the process of homogenisation is *isomorphism*. DiMaggio and Powell (1983) maintained that the concept of isomorphism consists of two types: 1) competitive isomorphism, and 2) institutional isomorphism. The former is most relevant for cases in which open competition exists, while the latter is suitable if free competition is absent. An example of the latter is the public sector environment in which an organisation must strive for political power and institutional legitimacy, for social as well as economic fitness.

This study adopts the second basis of institutional isomorphism, as within ILG free and open competition does not exist. However ILG does compete for legitimacy through political power via provincial and central government. In addition, isomorphism describes the process of the homogenisation of an organisation within a given environment (DiMaggio & Powell, 1983). Accordingly isomorphism "is a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions" (DiMaggio & Powell, 1983, p.149).

Institutional isomorphism is a useful concept in the modern era in which politics and ceremony are embedded in organisational life. The central notion of institutionalisation is that organisations act to reflect an evolution of structural pattern in doing things over time. Eventually this evolution becomes legitimised. Eisenhardt (1988, p. 489) claimed:

Therefore, it is possible to predict practices within organisations from perception of legitimate behaviour derived from cultural values, industry tradition, firm history, popular management folklore, and the like.

Every theory has its own key ideas and assumptions that define its parameters and applications. Table 3.1 provides a summary of the key aspects of institutional theory.

**Table 3.1: Institutional Theory Aspects**

Key idea	Organisational practices arise from imitative forces and firm tradition
Basis of Organisation	Legitimacy
View of People	Legitimacy seeking satisfiers
Role of Environment	A source of practices to which organisations conform
Role of Technology	Technology moderates the impact of institutional factors or can be determined institutionally
Problem domain	Organisational practices, in general
Independent variables	Industry traditions, legislation, social and political beliefs, founding conditions that comprise the institutional context
Assumptions	People satisfied, people conform to external norms

*Source:* Eisenhardt (1988)

From the institutional perspective organisational legitimacy is the basis for the existence of organisations. Hence to maintain their existence organisations need to be legitimate. Legitimacy is obtained by organisations through a pattern of actions undertaken within their environment (Pfeffer, 1982). By using structures and processes that are considered legitimate within the environment in which they operate organisations would appear to be responsible. That way they satisfy their stakeholders and avoid the negative impact of being blamed if something goes wrong in the future (Meyer & Rowan, 1977).

Built upon the work of Meyer and Rowan's (1977) cultural systems and Zucker's (1977) cognitive systems, Scott (2001) proposed three "pillars" of institutional process as mechanisms of institutionalism. Scott takes a different approach from DiMaggio and Powell, however, they have one thing in common and that is that they both consider isomorphism in some of their studies. Table 3.2 presents these three pillars of institutions proposed by Scott.



**Table 3.2: Three Pillars of Institutions**

	Regulative	Normative	Cultural-Cognitive
Basis of compliance	expedience	social obligation	Taken-for-grantedness, shared understanding
Basis for order	regulative rules	binding expectations	constitutive schema
Mechanisms	coercive	normative	mimetic
Logic	instrumentality	appropriateness	orthodoxy
Indicators	rules, laws, sanctions	certification, accreditation	common beliefs, shared logics of action, isomorphism
Affect	fear guilt/innocence	shame/ honour	certainty/confusion
Basis of legitimacy	legally sanctioned	morally governed	comprehensible, recognisable, culturally supported

*Source:* Scott (2001)

The regulative pillar comprises regulations and laws within a certain domain (i.e. the national or international level). Regulatory requirements imposed by central government are an example of their potential coercive<sup>14</sup> power over society or lower levels of government. The enactment of a law requires conformity in order to avoid sanctions and also to gain or maintain organisational legitimacy. There is agreement among scholars in the field of organisational theory that maintaining a good relationship with the external environment is equally important to improving internal efficiency and organisational performance. In this sense, the role of social legitimacy is crucial in keeping good relationships with the environment (Meyer & Rowan, 1977).

Other than coercive isomorphism, which occurs as a result of imposed regulations and laws, organisations may also gain legitimacy over time due to widespread practice. A certain management practice may be adopted in order to gain perceived legitimacy (through normative pressure) rather than to achieve better performance (Glynn & Abzug, 2002; DiMaggio & Powell, 1983; Meyer & Rowan, 1977). Widespread adoption over a relatively long period of time would then become taken for granted practice and, hence, represent the cultural-cognitive pillar.

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<sup>14</sup> Coercive and other isomorphic pressures are discussed in more detail below.

Social legitimacy can be maintained by accepting the socially taken-for-granted cognitive or normative symbolic components and hence complying with institutional requirements from the external environment. Consequently organisations operating within the same field, such as ILG, generally show similarity in structures and practices. This similarity among organisations as a result of normative and cognitive processes is called institutional isomorphism (DiMaggio & Powell, 1983).

In this sense, Scott (2008) claimed that pressures to adopt new management practices can come from regulative and normative systems. However, the adoption is in some cases symbolic only (Westphal & Zajac, 2001). Hence, from this perspective, the change processes in PMS are diffused throughout organisations by means of three mechanisms: coercive, mimetic, and normative isomorphism (DiMaggio & Powell, 1983). As the study of performance measurement in government entities emerged as a result of public sector reform, it is appropriate to refer to the concept of institutional isomorphism here (Pilcher, 2007).

With regard to public sector reforms Tolbert and Zucker (1983, p.25) claimed that "the rapid institutionalism of the reform rested on the assumed isomorphism between it and the ideal rational bureaucratic form". It is a common practice that in the reform era many private sector management tools such as PMS were brought to the public sector based on an assumption that private sector organisations operate more efficiently than public sector organisations. This adoption reflected the drive to rationalise government organisations, and isomorphic pressures play an important role in accelerating the process of adoption.

In addition, institutional theory considers institutional roles in society and the way they act to comply with societal norms. The theory "traces the emergence of distinctive forms, processes, strategies, outlooks and competencies as they emerge from patterns of organisational interaction and adaptation" (Selznick, 1996, p.271). Institutional theory suggests that organisations pursue legitimacy by conforming to isomorphic pressures in their environment (Ashworth, Boyne, & Delbridge, 2007).

Finally, institutional theory has become more widely used on a global basis, gaining acceptance in the study of organisations and becoming a dominant theory in the field

(Greenwood, Oliver, Sahlin, & Suddaby, 2008). However, there is a tendency to apply institutional theory in contexts far beyond its core purposes (Suddaby, 2010). Suddaby (2010) claimed that there is a need to bring institutional theory back to its core assumption and objectives. Many researchers used institutional theories in their researches following the famous “iron cage” paper written by DiMaggio and Powell (1983), which argued that organisations become isomorphic with their environment. However, in many cases, these researchers misinterpreted the original idea and argued that organisations are passive recipients of pressures from their environments. DiMaggio’s (1988) paper responded to this misinterpretation and suggested that researchers should attend to the idea that organisations also strategically respond to organisational pressures (Suddaby, 2010).

### **3.3.1 Institutional theory and performance measurement systems**

To explain the adoption of management innovations and their homogeneity within social systems, many scholars utilise two main theoretical approaches: efficiency theory and institutional theory (Strang & Macy, 2001; Strang & Soule, 1998; Westphal, Gulati, & Shortell, 1997; DiMaggio & Powell, 1983; Tolbert & Zucker, 1983). The former theory puts more emphasis on efficiency, while the latter relies more on legitimacy as the reason for adopting new practices.

Over the years, management control systems in which performance measurement has become an integral part of the system have been studied from functionalist, behavioural, interpretive and critical perspectives. Recent studies, however, have been particularly influenced by institutional theories (Berry, Coad, Harris, Otley, & Stringer, 2009). Studies that were undertaken based on this theory assumed that organisations, especially public sector organisations, compete not only for resources and customers but also for political power and institutional legitimacy.

Adoption of PMS as an important component of management reform in the public sector has become more prevalent in the last two decades. Some scholars claimed that the arguments for this movement were mainly rational or technical in nature, and that PMS was adopted as an effort towards achieving an efficient and effective organisation (Andrews, Boyne, & Walker, 2006; Meier, O’Toole Jr, Boyne &

Walker, 2006; Rainey & Steinbauer, 1999). As a result of PMS implementation better substantive performance would occur due to the expected benefits of enhanced efficiency, accountability, and quality of public service delivery. However, a different point of view is offered by institutional theory, which argues that the main reason underlying organisational change is gaining legitimacy rather than improving substantive performance (Ashworth, Boyne, & Delbridge, 2009).

This thesis investigates the development and use of performance indicators in conjunction with influencing factors and accountability practices in ILG. The possible influence of institutional isomorphism in the adoption and implementation of PMS within an institutional theory framework is also investigated. The development and use of performance indicators within government may depend on the power relationship between its constituents and itself. For example, it is very likely that when facing a more powerful government, a local government would have to conform to a performance measurement regime required to satisfy the central government's interest.

Even though institutional theory has other elements (legitimacy & decoupling), they were not included in the thesis as isomorphism was determined to provide a clearer explanation of the findings in the current context. *Legitimacy* (which focuses primarily on voluntary organisational behavior) and *decoupling* (which explains disconnection between two structures, one formal and one actual) were not included as in the Indonesian context the performance reporting (LAKIP/performance report) is mandatory not voluntary and there was no performance measurement system in place before the implementation of regulation on LAKIP. Hence, at the time of doing this research, LAKIP was a relatively new and untried practice. LAKIP is the first structure of its type in Indonesia and, as such, performance reporting did not exist prior to its adoption. Therefore, institutional isomorphism (coercive, mimetic and normative) was considered more appropriate and used as theoretical lens to explain performance reporting practice in ILG. "Symbolic" action in ILG was driven by regulation (coercive pressure) enacted by central government and not for seeking legitimacy.

In a decentralised government such as Indonesia, the central authority normally has greater coercive power over local government than other constituents (Brignall & Modell, 2000). Given this situation, institutional theory, particularly coercive isomorphism, will provide a better explanation for this phenomenon than the other theories considered and rejected (see Section 3.4). Next, the sources of pressures involved in the adoption of PMS in ILG are discussed using DiMaggio and Powell's three isomorphic pressure mechanisms.

### *Coercive Isomorphism*

Coercive isomorphism stems from political influence and the problem of legitimacy, and comes from both formal and informal pressures from other organisations. In a decentralised environment, central government normally has greater coercive power over local government (Brignall & Modell, 2000; Modell, 2001). Despite the decentralisation, by law central government has the continuing privilege to maintain control over local government units through the enactment of a new law or regulation. In the case of PMS, a local organisation is obliged to take account of the central government's mandate by annually submitting a performance report. As well, central government has the power to impose administrative sanctions in cases of nonconformity.

In institutional theory, coercive isomorphism may take place when organisations are forced to adopt similar methods (i.e. PMS) in order to comply with rules and regulations. Relevant rules and regulations are enforced by central government regarding performance reporting and accountability. Hence, in Indonesia, the sources of isomorphic pressures potentially come from central government via the enactment of laws and regulations that affect government organisations including local government. These regulations include Inpres No. 7/1999 that require all government entities, including local government, to report on their performance to central government. This coercive pressure tends to occur due to the fact that most local governments are heavily dependent on central government for their financial resources.

Even though ILG is required to submit performance reports to central government, this does not mean that they actually use performance information in their day-to-day management practices. In a study on performance measurement for accountability purposes, Cavalluzzo and Ittner (2004) found that implementation of externally mandated PMS in United States government organisations was used merely to fulfil regulatory requirements, and tended to be symbolic in nature, without substantive impact on internal operations. Therefore, an understanding of the factors influencing the development and use of performance measures is very important. The knowledge of these factors could, in turn, be utilised to evaluate and improve future government policy.

### *Mimetic Isomorphism*

Mimetic isomorphism emerges as a result of an effort to respond to environmental uncertainty in the field. Where organisations operate in this type of environment, they tend to mimic others in order to achieve legitimacy. There are 445 ILG, all of which differ in terms of size, assets, population, human resources, financial capabilities, and managerial skill. With regard to management practices, such as producing and using LAKIP, they are not all at the same stage. Most ILG are still in the very basic stages of implementation, although a few have achieved a more advanced stage. Councils can learn from each other to improve their management capabilities through any kind of media facilitated by the central government. These media include universities, consultancy firms, and local government associations such as Badan Kerjasama Kabupaten Seluruh Indonesia (BKCSI) for regencies and Asosiasi Pemerintah Kota Seluruh Indonesia (APEKSI) for cities.<sup>15, 16</sup>

There have been several major projects undertaken in Indonesia by professional consultancy firms in collaboration with Indonesian central government. These projects provide technical assistance on relevant public management tools to selected ILG, and disseminate the outcome of the projects to other ILG. Mimicry can happen indirectly through the media of consulting firms and trade associations (DiMaggio &

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<sup>15</sup> <http://www.bkksi.or.id>

<sup>16</sup> <http://www.apekti.or.id>

Powell, 1983). Therefore, in day-to-day practices, it is suggested here that the potential exists for councils to mimic others that they assume have succeeded in their implementation process. As suggested by DiMaggio and Powell (1983, p.150) "mimetic isomorphism provides that organisations tend to model themselves and imitate the practices and policies of those organisations perceived to be legitimate and successful".

### *Normative Isomorphism*

Normative isomorphism is usually associated with professionalism to provide a better insight, and hence a better explanation, to the findings of the research. Normative isomorphism takes place when norms are internalised within organisations along with outside coercive social pressure (Mizruchi & Fein, 1999). Organisations are sometimes pressured to follow best practices or normative guidelines (Dacin, 1997). According to Ryan and Purcell (2004, p.10) "normative influences refer to shared norms of organisational members, that is, those values that may be unspoken, or expectations that have gained acceptance within organisations". Appari et al. (2009, p.4) wrote:

Normative pressure stems from the cultural expectation that agents feel compelled to honour, often because they are rooted in professional affiliations, including educational background, professional networks, and consultant arrangements.

Given the low level of human resources capacity in ILG, there has been a trend in the last decade to give more attention to the education of government employees and officials (Mera, 2000). As this demand emerged, many universities in Indonesia began offering programs (degree and non-degree) that are specially designed to respond to government employee and official needs. Thousands of government employees and officials have graduated from such programs. DiMaggio and Powell (1983) argued that the more educated the workforce becomes, in terms of academic qualification and participation in professional and trade associations, the greater the extent to which the organisation becomes similar to other organisations in the field.

Different actors in the government context interrelate in a complex web of interactions. In Indonesia, the set of organisations that interact with the ILG in terms of PMS and accountability practices are: 1) Central Ministry (e.g. MoHA); 2) Provincial government offices (e.g. Governor Office); 3) Legislatures (e.g. Local Parliament); 4) Audit agencies (e.g. BPKP); 5) Non-Government Organisations (NGO).

Despite this fact, most literature on government performance measurement assumes that there is a relatively simple principal-agent relationship, and makes little room for the "multiple principals" issue. Consequently, studies of performance in the public sector within an institutional context are limited (Talbot, 2008). Therefore this thesis attempts to fill the gap by examining within an institutional theory context the interaction between actors involved in the practices of PMS and accountability in ILG.

Most of the previous studies on PMS and accountability utilised agency theory. Given the issues discussed above, this study will employ institutional theory. In this case institutional theory is more appropriate to explaining the adoption of PMS and accountability practices within public sector organisations. Specifically, this thesis uses the idea of isomorphism to explain the symbolic rather than substantive adoption and implementation of PMS among ILG.

### **3.4 Prior Studies Using Institutional Isomorphism**

The concept of isomorphism has gained popularity among scholars of organisations and thus has been widely used as a theoretical framework within many studies conducted all over the world. The following is a summary of the prior research in this area.

Using a diverse set of archival data and interviews with key actors, Mir and Rahaman (2005) studied the adoption of international accounting standards (IASs) in Bangladesh. Their study found that the major factor behind the decision to adopt IASs was the desire to gain institutional legitimacy. Like many other developing countries, both public and private organisations in Bangladesh were operating under



a lending scheme from an international donor institution (i.e. IMF and World Bank). Hence, government and private organisations in Bangladesh needed a strong accountability arrangement with the lending institution, and credibility with foreign investors. This reality resulted in extreme pressure to conform to these international bodies' required accounting standards.

In 2006, Barreto and Baden-Fuller developed an important strand in the institutional literature, by undertaking a study of international imitation. This study offered new insight into mimetic isomorphism and its reliance on legitimacy. Barreto and Baden-Fuller (2006) examined Portuguese bank branch decisions between 1988 and 1996, and found that there was a tendency for the banks in the study to imitate other banks. Another important finding was that mimetic practices produced a negative effect on bank profitability. They concluded that legitimacy pressures played a major role in organisational decision making, and produced the tension between the pressure to conform and the pressure to perform.

In their effort to propose remedies for the drastic reduction in the diversity of topics within the academic accounting literature, Tuttle and Dillard (2007) applied institutional theory to the field of academic accounting research in the United States. They found that all three types of institutional isomorphism—coercive, normative, and mimetic—appeared to shape the organisational field of accounting research. Normative isomorphism within professional associations such as the American Accounting Association (AAA) was central in affecting the choice of topic in accounting research. In this sense, theoretical relevance was often eclipsed by institutional pressures. Appropriate programs and actions for enhancing diversity were proposed to counter the institutional forces acting within the field of academic accounting research.

Trevino, Thomas, and Cullen (2008) examined institutional reform in sixteen Latin American countries between 1970 and 2000. This study applied an institutional isomorphism concept to its examination of the process of institutionalisation and legitimisation and its impact on organisational decision making regarding inward Foreign Direct Investment (FDI). Results indicated that mimetic and normative isomorphism (e.g. educational attainment, privatisation, bilateral investment treaties,

and political uncertainty) were more effective than coercive isomorphism (e.g. tax reform, trade reform, and financial account liberalisation) in promoting inward FDI.

Kim, Kim, and Lee (2009) applied institutional analysis in an e-government system for anti-corruption in Korea. Using a single case analysis this study evaluated the development of an anti-corruption system called OPEN (Online Procedures Enhancement for Civil Application) in the Seoul Metropolitan Government. The findings indicated that the regulatory dimension (coercive isomorphism) was most effective, and that strong leadership was crucial to the success of the OPEN system.

In their study, Arnaboldi, Azzone, and Palermo (2010) explored the adoption of managerial innovation in the Italian public sector, specifically Italian central government. Their study used institutional theory, and identified the reasons why the uptake and use of managerial innovation may fail. The problems were investigated by way of a case study approach. The study found that failure in the adoption and use of managerial innovations was caused by a complex interplay of external forces. After a decade, adoption turned out to be merely for the sake of formality, without any real impact on organisational performance. The decision to adopt was forced by legislation, implying the presence of coercive isomorphism. External consultants also played a major role, reflecting the influence of normative isomorphism.

Judge, Li, and Pinsker (2010) studied the national adoption of IASs from the institutional perspective. This study was conducted to seek an understanding of why some countries have embraced IASs, some partially adopt, and others continue to resist. They found that all three forms of isomorphism were predictive of International Financial Reporting Standards (IFRS) adoption across the world. Specifically, they found that foreign aid (coercive), import penetration (mimetic), and level of education (normative) were all predictive of the degree to which IASs were adopted, or not, by 132 developing, transitional, and developed countries.

Han and Koo (2010) conducted a study that drew on the idea of isomorphism and decoupling to explain the rapid diffusion of performance compensation systems among Korean firms. Utilising a survey the study found that all three components of isomorphism—coercive, mimetic, and normative—had a significant influence on the

adoption of performance compensation systems where there was a compromised form between seniority and performance pay. Table 3.3 summarises the studies surveyed above.

**Table 3.3: Summary of Prior Studies**

No	Researchers	Year	Topics	Contexts	Types of Pressures
1	Mir & Rahaman	2005	IASs	Bangladesh's public and private organisations	coercive
2	Barreto & Baden-Fuller	2006	Branch decision	Portuguese Banks	mimetic
3	Tuttle & Dillard	2007	Research topic	US Universities	normative
4	Trevino et al.	2008	FDI	Latin American countries	mimetic & normative
5	Kim et al.	2009	e-Government	Seoul Metropolitan Government	coercive
6	Arnaboldi et al.	2010	Managerial innovation	Italian Public Sector	coercive & normative
7	Judge et al.	2010	IASs	132 countries	coercive, mimetic & normative
8	Han & Koo	2010	Compensation	Korean firms	coercive, mimetic & normative

It is clear from the table above that institutional isomorphism has been used in a large number of studies in the past, and has been proven effective in explaining the reasons underlying the adoption and implementation of a certain system of practices within an organisation. All the studies overviewed found the existence of at least one component of isomorphism. In general coercive isomorphism was found to be the strongest.

In a manner similar to the prior studies surveyed above, this study employs institutional isomorphism as its theoretical framework. It expands the application of institutional isomorphism in the area of performance measurement and accountability and widens the context to Indonesia, specifically ILG. Hence, this study is expected to provide a significant contribution to institutional theory.

### **3.5 Conceptual Schema**

Despite the increasing trend towards performance measurement research, only limited attention has been paid to hypothesis testing and theory construction (e.g. de Lancer Julnes & Holzer, 2001; Wang & Berman, 2000; Yang & Hsieh, 2007). The majority of the studies in this field have been descriptive or prescriptive in nature. This section outlines the conceptual framework designed to facilitate hypothesis testing and theory construction.

The development of a conceptual framework is crucial to explaining what actually occurred in the reform process. A framework is needed before one can explain meaningful relationships between variables. Mintzberg (1979, p.587) claimed that "explanation is, of course, the purpose of research". Performance measurement (detailed in Section 3.5.1) and accountability (detailed in Section 3.5.2) are the two dependent variables under examination in this study.

#### **3.5.1 Performance measurement: development and use**

The adoption of PMS is an important factor in an organisation's ability to achieve its goals. One central goal of public sector organisations such as ILG is to provide a high level of accountability to their stakeholders. "Performance measurement has long been promoted as a method of achieving greater accountability in local government" (Ammons & Rivenbark, 2008, p.313). The collection, analysis and publication of performance information will enable legislatures and the public to hold both ministers and public servants more accountable. Without relevant performance information, it is very difficult for any organisation including ILG to track the progress of its efforts. Simply having performance indicators, however, is not sufficient for organisations, as the effective use of them is far more important. The real use of indicators should be to enable organisations to improve their management and governance (Ho, 2005; Moynihan, 2005; Hatry, 2002; Wholey, 1999).

There are two antecedents of accountability that arise as consequences of PMS implementation. The events are the development and the use of performance

indicators (de Lancer Julnes & Holzer, 2001; Melkers & Willoughby, 2005; Moynihan, 2005). Development refers to the design and production of performance indicators related to a certain program/activity, whereas use refers to the utilisation of indicators for a certain purpose such as day-to-day managerial decision making. Some scholars used the term adoption in referring to development of indicators and implementation to refer to the use of indicators. However, this thesis will use the former terms.

Determining and understanding the factors that influence the development and use of performance indicators is therefore crucial given the central role of PMS in organisations. This study tests influencing factors associated with the development and use of performance indicators. The development and use of performance indicators in turn may have various determinants. However, there is no convincing evidence regarding either the extent to which or the way in which the two aspects (development and use of indicators) differ in their determinants (Yang and Hsieh, 2007). Hence, the model in this study uses the same set of factors as independent variables for both events (refer to Figure 3.1 at the end of the next section).

### **3.5.2 Accountability: internal and external**

A large number of studies have focused on either performance measurement or accountability. Research is not so forthcoming in Indonesia when it comes to integrating performance management and accountability within a single study. . "A parallel field of study, but most often unconnected to performance, has been the accountability of public organisations and institutions" (Talbot, 2008, p.1575). Improved accountability is a crucial requirement in democratic governance. This requirement, in part, is considered as a corollary of improved management practice including performance measurement (World Bank, 2006). Bearing those observations in mind, this study combines the model of accountability from Wang (2002) and the model of performance measurement from Cavalluzzo and Ittner (2004) to form one integral study. What develops will be a new model designed to provide a template for future studies.

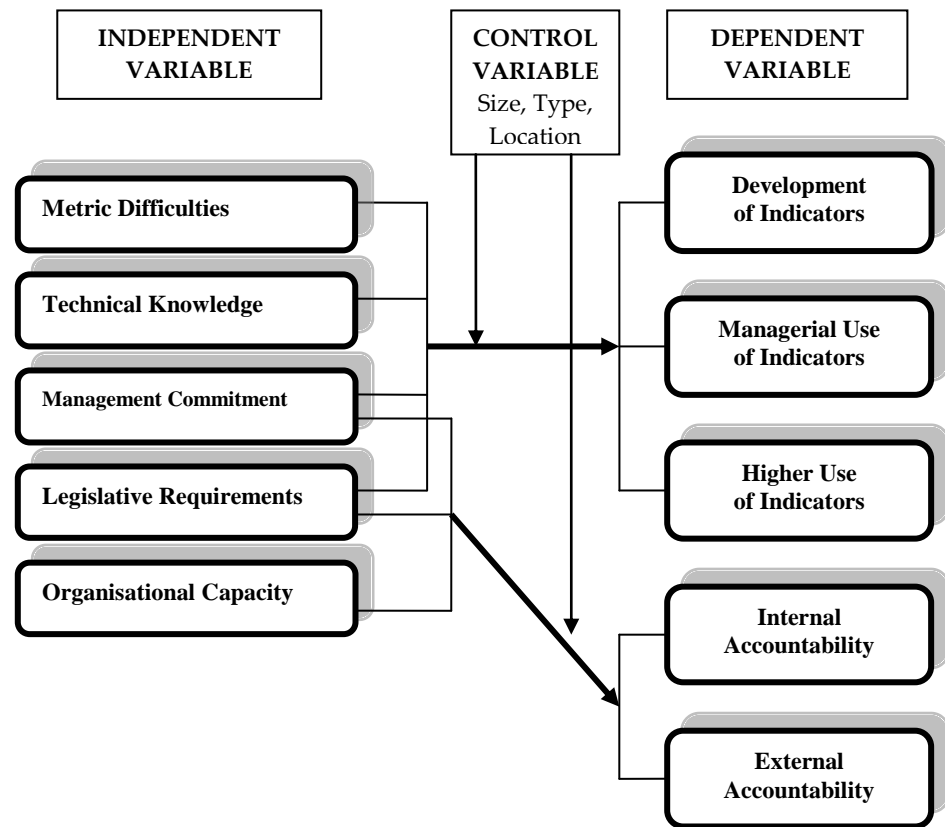
Accountability has always been a central concern of both the study and the practice of public management. As discussed in the literature review the concept has also been elusive and controversial. In political and academic contexts accountability is viewed as a very broad term as it functions as an umbrella that covers various concepts, such as transparency, equity, democracy, efficiency, responsiveness, responsibility, and integrity (Mulgan, 2001).

This thesis, however, takes a relatively narrow, but operational, perspective on accountability by breaking it down into only two terms: *internal* and *external* accountability. The model proposed within this study focuses on internal and external aspects of accountability as these two aspects are also closely related to performance measurement. Internal accountability focuses on the interaction between the manager and the head of the ILG. External accountability focuses on the interaction between ILG and the stakeholders (e.g. central government, local parliament). By separating internal and external accountability, the factors affecting the two concepts can be determined and analysed separately.

For the sake of meaningful explanation, Figure 3.1 was developed to depict the conceptual model tested in the analysis. As mentioned earlier, the model, modified and extended in a way to enable it to fit within the ILG context, is based on previous studies relating to performance measurement and accountability—mainly from the study of Cavalluzzo and Ittner (2004) and Wang (2002). The first four independent variables were adapted from Cavalluzzo and Ittner's study and the fifth from Wang's work. With regard to dependent variables, the first three variables were adapted from Cavalluzzo and Ittner's research, while the last two variables were from Wang's study. In addition, the model in this thesis integrates institutional theory as the theoretical framework to further explain the practice of PMS and accountability. The hypothesised relationships between all constructs will be discussed in the following sections along with the hypotheses proposed.

To permit better understanding of the model used in this study, operational definitions of the variables used are provided below. The terms used in the model of this study are briefly defined as follows:

1. Metric Difficulties: difficulties selecting and interpreting appropriate performance metrics in hard-to-measure activities.
2. Technical Knowledge: knowledge related to design, implementation and use of performance indicators.
3. Management Commitment: top management support for the development and use of performance indicators.
4. Legislative Requirement: mandated performance measurement initiatives via laws and regulations.
5. Organisational Capacity: organisational capabilities related to management information, accounting and budgeting systems.
6. Development of Indicators: the process of producing performance indicators within an organisation.
7. Managerial Use of Indicator: use of performance indicators at the managerial level (i.e. Head of Department).
8. Higher Use of Indicators: use of performance indicators at a higher level (i.e. Head of District).
9. Internal Accountability: accountability mechanism within an organisation (i.e. between manager and mayor).
10. External Accountability: accountability mechanism between an organisation and its stakeholders (i.e. between ILG and local citizen).



**Figure 3.1: Conceptual Model**

### 3.6 Hypotheses Development

The research starts by asking questions about how technical (metric difficulties, knowledge, and organisational capacity), organisational (management commitment) and institutional factors (legislative requirement) affect the development and use of performance indicators in ILG.

This study adopted metric difficulties, technical knowledge, management commitment and legislative requirement from Cavalluzzo & Ittner's study (2004) and organisational capacity from Wang's study (2002) as independent variables to explain the practices of development and use of performance indicators in ILG. It also integrates relevant dependent variables of accountability from the study of Wang (2002) into the model. The rationale for this inclusion is that accountability is a crucial concept in democratic governance and a better standard of accountability is a



reflection of improved management practices such as performance measurement (World Bank, 2006). In addition, the purpose of performance measurement is to establish a system that can measure results through the indicators and use the information to improve management and accountability, and not merely to develop indicators (Ho, 2005; Moynihan, 2005; Hatry, 2002; Wholey, 1999).

Five dependent and five independent variables were employed in the research model. Table 3.4 presents hypothesised inter-variable relationships to be tested in this study.

**Table 3.4: Variables Relationship in the Model**

Independent Variables	Dependent Variables				
	a. Dev	b. MUse	c. HUse	d. IAcc	e. EAcc
1.Metric Difficulties	H1a (-)	H1b (-)	H1c(-)		
2.Technical Knowledge	H2a(+)	H2b(+)	H2c(+)		
3.Management Commitment	H3a(+)	H3b(+)	H3c(+)	H3d(+)	H3e(+)
4.Legislative Requirements	H4a(+)	H4b(+)	H4c(+)	H4d(+)	H4e(+)
5.Organisational Capacities				H5d(+)	H5e(+)

*Legend:*

Dev=Development of Indicator, MUse=Managerial Use of Indicator, HUse=Higher Use of Indicator, IAcc=Internal Accountability, EAcc=External Accountability

This section presents all the hypotheses developed in this thesis based on the conceptual model discussed above. Associations among variables are discussed first, prior to the development of hypotheses.

### **3.6.1 Metric difficulties**

The first independent variable refers to measurability of organisational output or outcome. In public sector organisations the complexity of programs is not homogenous. Some outputs and effects are relatively easy to measure yet some are difficult or cannot be quantitatively measured at all. Naturally, "more tangible outputs and outcomes can be measured in a more precise way compared to non-tangibles" (van Dooren, 2005). This issue is not public-sector-specific as the same phenomenon also exists in the private sector.

In Indonesia, Mahmudi (2003) found that local government officials had difficulties in determining higher level indicators such as outcome, benefit and impact.

Therefore, in practice, they placed more weight on input measures rather than outcome measures. Further, the problem in the public sector is that "clear and logically consistent methods have not been readily available to help managers understanding of performance indicators" (McLaughlin & Jordan, 1999, p.65).

Given the situation, it is logical to expect that there will be a tendency among performance measurement users to give more weight to the easy-to-measure indicators. Consequently, it is assumed that there is a negative association between metric difficulties and development and use of performance indicators. Therefore the first three hypotheses proposed are:

H1a: The development of performance indicators is negatively associated with metric difficulties.

H1b: Managerial use of performance indicators is negatively associated with metric difficulties.

H1c: Higher use of performance indicators is negatively associated with metric difficulties.

### **3.6.2 Technical knowledge**

An organisational factor that is expected to influence the development and use of performance indicators is the extent to which training on related knowledge is provided to support the implementation (Cavalluzzo & Ittner, 2004; Shields, 1995). Shields (1995) argues that training in the design, implementation and use of management accounting innovation allows organisations to articulate the link between the new practices and the organisational objectives. This, in turn, provides a mechanism for employees to understand, accept and feel comfortable with the innovation.

Learning from the implementation process of PMS in Indonesia, it appears that a lack of understanding of the system has had an impact on PMS practices (Riandi, 2003; Sukarno, 2006). Technical knowledge enables improvement in the ability of internal stakeholders to understand and use PMS, and will positively improve the development and use of performance indicators (de Lancer Julnes & Holzer, 2001; Laurensius & Halim, 2005). Different types of efforts, from technical training to

formal degree programs, have been undertaken in Indonesia to increase the knowledge of government employees and officers (i.e. MEP-UGM).<sup>17</sup> In that context, *normative* mechanisms as suggested by DiMaggio and Powell (1983) may also ensue in practice. It is a logical assumption that there is a positive association between improved technical knowledge and development and use of performance indicators. Therefore the second three hypotheses proposed are:

H2a: The development of performance indicators is positively associated with related technical knowledge.

H2b: Managerial use of performance indicators is positively associated with related technical knowledge.

H2c: Higher use of performance indicators is positively associated with related technical knowledge.

### **3.6.3 Management commitment**

The implementation of PMS in government requires changes in the operation, personnel, structure, or even culture of the organisation. These kinds of changes are likely to create resistance within an organisation. When it comes to developing and using performance indicators, as in any organisational change, it is very important to build high levels of commitment among senior management first and then gather support from middle managers and staff (Fernandez & Rainey, 2006; Rainey, 2003).

Therefore, to succeed in the process of developing and using performance indicators, support from within the organisation in the form of management commitment is highly crucial. Moreover Wilkins (in de Lancer Julnes & Holzer, 2001) stated that changes can only occur if top management has commitment to the adoption and implementation of PMS. De Lancer Julnes and Holzer (2001) also found that internal stakeholder support was positively related to the adoption of PMS.

In addition, management provides the political support needed to encourage and motivate individuals who resist the innovation. Other than financial resources, time,

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<sup>17</sup> Program Magister Ekonomika Pembangunan, Universitas Gadjah Mada in Yogyakarta offers intensive training and post-graduate degree in public sector management area. [www.mep.ugm.ac.id](http://www.mep.ugm.ac.id)

and personnel, a tangible internal commitment, especially among top level management within an organisation, is required for the implementation success of performance reporting in Indonesia (Sukarno, 2006). It appears that management commitment is a crucial factor in the success of innovation related to performance measurement and accountability practices. Based on this context the next three hypotheses are:

H3a: The development of performance indicators is positively associated with management commitment.

H3b: Managerial use of performance indicators is positively associated with management commitment.

H3c: Higher use of performance indicators is positively associated with management commitment.

In the reform era, which is characterised by demands for accountability from external stakeholders, providing greater transparency and accountability can be used as strategies to appease these stakeholders. Accountability is facilitated when government employees or officials are willing to be held accountable for their tasks. Accountability is also improved when they are active in making an effort to create new ideas to improve it (Wang, 2002). Therefore:

H3d: Internal accountability is positively associated with management commitment.

H3e: External accountability is positively associated with management commitment.

#### **3.6.4 Legislative requirements**

Many have perceived that the desire to be more accountable, efficient and effective has led to the widespread adoption of PMS by public organisations across the world. Indonesian government (including ILG as its third-tier government) as a newly democratic country was no exception. However, development of performance measurement practices may be driven by external institutional pressures (Moynihan, 2005). There has been some evidence from other countries to this effect. A large survey, conducted to find evidence of performance practices across the UK public

sector, revealed that "public managers rated legislation as one of the main drivers for change" (Talbot, 2008, p.1572).

Institutional theory suggests that regulatory requirements are an organisational factor that is relevant to the success of reform implementation in government organisations (e.g. Brignall & Modell, 2000). Further, in an institutional environment such as ILG that primarily depends on an external organisation (i.e. central government) for its financial support, external bodies have the authority to impose organisational practices on subordinate units. Regulation inside government implies that one organisation (e.g. central government) shapes the activities of others (e.g. ILG). In the case of performance reporting, central government has certain mandates to scrutinise the behaviour of the ILG and seek to change it. These include the external audit function conducted by the central government audit office (e.g. BPKP).

Consequently, ILGs as subordinate organisations will implement the required practices, but the actual results tend to be superficial (Scott, 1987). The implementation process of Inpres No.7/1999 on accountability in Indonesia was highly centralistic. The Inpres has had a major impact on the growth of planning practices throughout government (Podger & Perwira, 2004). Most entities now prepare strategic plans (or at least have hired consultants to prepare them), and most prepare annual performance reports. However, few entities have related the performance report back to planning and budgeting (Podger & Perwira, 2004). Turner (2000) claimed that the imposition of structural changes enhancing regional autonomy would curtail much of the centrist orientation but would not necessarily increase local government accountability.

Further, in a study of the US government's attempt to apply multi-dimensional performance measurements for accountability purposes, Cavalluzzo and Ittner (2004) found that implementation of externally mandated PMS was used to meet legal requirements. The outcome of this development was that the measures had little influence on internal operations. In other words, it was just more "to conform than to perform" (Barreto & Baden-Fuller, 2006, p.1559). From this perspective, *coercive* mechanisms as suggested by DiMaggio and Powell (1983) may take place in practice. Like management commitment, legislative requirement is a crucial aspect in

the success of innovation with respect to both performance measurement and accountability practices. Hence, the next five hypotheses are:

H4a: The development of performance indicators is positively associated with legislative requirements.

H4b: Managerial use of performance indicators is not associated with legislative requirements.

H4c: Higher use of performance indicators is not associated with legislative requirements.

H4d: Internal accountability is positively associated with legislative requirements.

H4e: External accountability is positively associated with legislative requirements.

### **3.6.5 Organisational capacity**

The final factor employed in the model concerns the impact of organisational capacity and resources on accountability practices. Previous studies claimed insufficient resources provided an explanation for implementation failure (i.e. developing without using). Ammonds & Rodrigues (1986) found that only very modest amounts of executive and staff time are devoted to appraisal systems in cities in the USA. The importance of capable staff in regards to the intensive use of performance measurement information has been studied by Wang and Berman (2000). They also looked at other factors such as information systems as a requirement for measuring organisational capacity.

Further, van Dooren (2005) argued that lack of resources is an issue in performance measurement practice. Hence, organisations conclude that they do not have enough resources to implement performance measurement. Laurensius & Halim (2005) found that in Indonesia resources have statistically significant effects on developing performance indicators. Their findings support de Lancer Julnes and Holzer (2001) who claimed that committed resources had a significant effect on the development of performance indicators. Hence, the next hypotheses are:

H5d: Internal accountability is positively associated with organisational capacity.

H5e: External accountability is positively associated with organisational capacity.

To summarise, five independent variables (metric difficulties, technical knowledge, management commitment, regulatory requirement, and organisational capacity) have been discussed in association with the five dependent variables (development of indicators, managerial use of indicators, higher use of indicators, internal accountability and external accountability) to generate hypotheses used in the model of this study.

### **3.7 Summary**

This chapter has reviewed the application of institutional isomorphism in performance measurement and accountability practices in the public sector, especially in local government. Three aspects concerning isomorphic pressure — coercive, mimetic, and normative isomorphism and their relationship to accountability and performance measurement practices—have been discussed.

This chapter also has presented a conceptual framework relating five independent variables to five dependent variables. This framework is built upon the literature review discussed in Chapter 2.

The next chapter discusses the research design employed in the thesis.

## **Chapter 4: Research Methodology**

### **4.1 Introduction**

Based on the literature review presented in the previous two chapters, this chapter considers how the research strategies and methods deployed in this thesis were developed. It provides an explanation on how the thesis was conducted and the reason behind the selection of the methods used. The chapter begins with an explanation of the paradigm debate in the field of management accounting (Section 4.2), followed by the research plan (Section 4.3). A discussion on the development of the research instrument is presented in Section 4.4. The data collection method is described in Section 4.5, with quantitative and qualitative data analysis provided in Sections 4.6 and 4.7, respectively. Section 4.8 provides information regarding the pilot test conducted, whilst Section 4.9 presents ethical considerations. Finally Section 4.10 concludes the chapter with a summary.

### **4.2 Paradigmatic Debate**

A philosophical assumption or paradigm is generally required in any scientific research as a foundation upon which the whole investigation is conducted. This assumption provides the framework for determining the choice of research methodology and methods employed in a study.

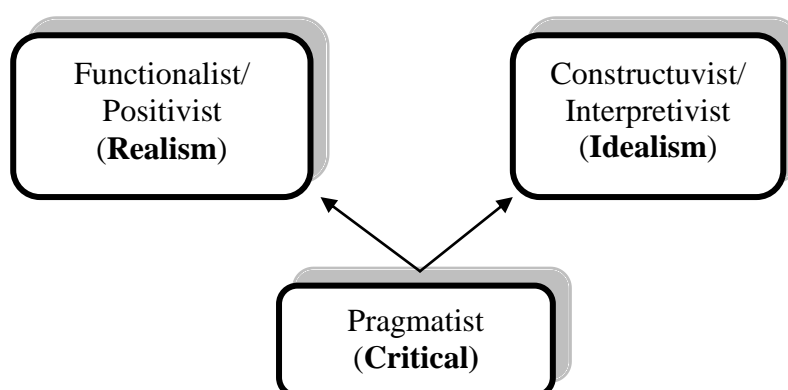
When it comes to classifying research paradigms, various scholars offer different categorisations (see, for example Creswell, 2003; Crotty, 1998; Lincoln & Guba, 2000). However, among those many different categorisations the most prevalent ones in accounting research are positivism and interpretivism. These two classifications differ in three ways. First, ontologically the advocates of positivism believe in the objectivity (independent from human experiences) of reality whilst the advocates of interpretivism emphasise the subjectivity of reality (constructed through human interactions). Second, epistemologically, positivists utilise a hypothetic-deductive approach to test and build a theory. Interpretivists, in contrast, contend that knowledge should be obtained through the understanding of human and social interaction by which subjective reality is constructed. Third, methodologically



positivists point out that researchers should test a theory in a value-free position and utilise objective measurement in collecting research evidence. In this context, a quantitative method (e.g. survey) is an instrument typically used by positivists. In contrast, interpretivists argue that in understanding the meaning embedded in human and social interaction, researchers need to be involved in the context under investigation. In-depth interviews with respondents are an example of the data collection methods used by interpretivists (Creswell, 2003).

Philosophical underpinning (paradigm) of research is diverse (refer to Figure 4.1). It is important to understand this distinction in order to determine where mixed method research fits in the research process.

**Figure 4.1 Research Paradigm**



There are three philosophical dimensions of research, namely: 1) ontological dimension, 2) epistemological dimension, and 3) methodological dimension. From an ontological dimension, research may be undertaken from two extreme positions – realist or idealist views of the world. The main distinction is on the debate about whether reality is constructed based on the concepts the mind brings to the process of observation or whether it exists independently of the observer. Epistemologically, there is a choice between positivist or interpretivist's point of view. Positivists argue that to be valid knowledge must be based on hypothesis testing and it will have survived many rounds of empirical testing. On the other hand, interpretivists view knowledge as being derived from the meaning of events with emphasis on

interpretation as the key means of justifying a claim for a certain knowledge. Methodologically, there are two extremes – quantitative or qualitative method.

In the field of management accounting, there has historically been a continuing fundamental debate regarding the philosophical assumption or paradigm on which a research study is to be based. This debate resulted in a dichotomy of research paradigms known as "the mainstream" and "the alternative". The mainstream, which is positivist (economics-based), and the alternative, which is interpretivist (sociology-based), have created a paradigm divide in management accounting research (Modell, 2010).

Historically, mainstream accounting research is grounded in a common set of philosophical assumptions under positivism. Unfortunately, this has limited the range of problems studied and also inherently has limited research methods used. In addition, it prevents the researcher obtaining alternative insights into the problem being analysed (Chua, 1986). Two main alternatives emerged: interpretivism and critical/pragmatism (Chua, 1986; Howe, 1988). Proponents of positivism believe in objective, external reality whereas proponents of interpretivism believe in multiple, subjective realities (Greenberg and Folger, 1988). The concept of pragmatism focuses on the compatibility between quantitative and qualitative methods. Tashakori and Teddlie (1998) contend that pragmatism differs from positivism and interpretivism. The main distinction is that pragmatism allows the use of both quantitative and qualitative methods in a single study.

#### **4.2.1 The role of mixed-method research**

This section is intended to explain and position mixed-method research as the method of choice in this thesis. Generally, there are two main classifications in research practices, namely quantitative and qualitative research. However, in many areas of research there has long been a tendency to utilise a combination of these two methods in a mixed-method research strategy in order to achieve enhanced validity and richer results. Theoretically, one important objective of the use of a mixed-method approach is to bridge the paradigm divide (Modell, 2010). More than two

decades ago, for instance, Greene, Caracelli, and Graham (1989, p.256) defined mixed research methods in a simple way as:

Those that include at least one quantitative method (designed to collect numbers) and one qualitative method (designed to collect words), where neither type of method is inherently linked to any particular inquiry paradigm.

Statistical techniques used in quantitative methods are rarely able to provide an indepth depiction of the effects of causal powers in a particular social context. Instead, statistical analysis may simply reveal covariations amongs variables indicating "certain tendencies in the occurrence of events" (Modell, 2009, p.212). Further, Modell (2009, p.212) claims that these tendencies "should not be interpreted as direct reflections of real mechanisms ...".

In response to this situation, researchers need to go beyond such tendencies and move further to specify, in more detail, the contingent conditions underlying the causal relationship (Tsoukas, 1989). Hence, the research needed to be expanded to include "human experiences of actual events" (Modell, 2009, p.212) in order to consider causal explanations regarding the existence of coercive pressures in ILG performance reporting practices. This need for more insight into what context specific factors are involved in the causal relationship suggests that qualitative methods may be important in complementing statistical analysis (Downward and Mearman, 2006; Mingers, 2006; Sayer, 2000).

Combining quantitative and qualitative approaches into a mixed-method research strategy is occurring more often, and is likely to continue to grow in popularity in management accounting research (e.g., Anderson & Widener, 2007; Lillis & Mundy, 2005; Modell, 2005). The growing interest in the mixed-method approach emerged as a result of increased complexity in modern accounting research. This approach has generally been considered as more desirable to enable researchers to combine the breadth of the quantitative approach with the depth of the qualitative approach within a single empirical study. In addition, this approach would enhance the validity of

research findings through triangulation and would facilitate the utilisation of multiple theories (Modell, 2005).

In the area of PMS, many prior studies have identified technical and organisational factors associated with the implementation of PMS, as well as the use and usefulness of performance indicators developed within the systems (see for example Cavalluzzo & Ittner, 2004; Wang, 2007). In spite of the heightened interest in performance measurement research many fundamental questions remain unanswered, especially regarding the behavioural or institutional (i.e. motivation) aspects behind the implementation process.

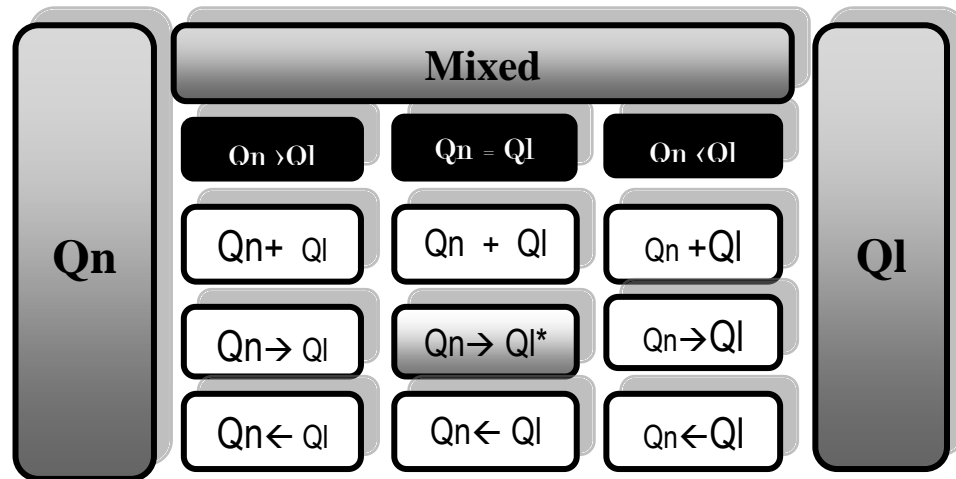
Frank and D'Souza (2004) claimed that the single research method normally employed in the field of performance management is unlikely to answer these types of questions. They further claimed that the majority of the research in the field has been simply in the form of either one-jurisdiction case studies or fixed-response mail surveys. Those research methods, in many cases, permitted only a limited contribution to the field, and often created a serious mismatch between method employed and substance of the topic under examination (Stallings, 1986).

Based on the foregoing discussion, this thesis employs a mixed-method research process in order to overcome the disadvantages of a single approach. By doing so it enhances the validity of the research and at the same time answers a wide array of questions regarding behavioural and institutional aspects of PMS implementation. The nation-wide survey conducted in phase one provided more breath for empirical inquiries, and the in-depth interviews undertaken in phase two provided greater insight into the underlying motivations. Using the mixed-method approach enables this thesis to offer significant contributions to the area of public sector performance measurement and accountability at both the practical and theoretical level.

Mixed method consists of both a quantitative and qualitative phase in a single study. Figure 4.2 depicts nine possible mixed method designs. The notation used is provided at the bottom of the figure. Mixed method research can occur in many different combinations (refer to Figure 4.2). Two primary decisions should be made by researchers: 1) which one is the dominant paradigm; and 2) how the research is

conducted - concurrently or sequentially. This study used sequential and equal design. First, a quantitative phase was conducted followed by a qualitative phase with equal weight.

**Figure 4.2 Mixed Method Approach Matrix**



Note: Qn= Quantitative, Ql=Qualitative, + = concurrent,  $\rightarrow/\leftarrow$  = sequent, bigger font denote high weight, smaller font denote low weight, \* = approach used in this study

Selecting the most appropriate research methods to answer the research questions in this thesis was not an easy task. First, like in developed countries, there is no accessible single source of data about performance measurement and accountability in ILG. Second, this thesis addressed topics of accountability and performance measurement, which are still under-researched in Indonesia in general and at the local level in particular. Therefore, it was necessary to design a combination of the research methods available to accommodate the complexity of the research questions.

To answer the research questions a mixed-method approach was chosen. Quantitative and qualitative data were collected sequentially using questionnaires for the first phase and in-depth interviews for the second phase. The advantage of using a mixed method is that the quantitative side can be used to measure outcomes and the qualitative side can provide a greater depth of understanding about a complex phenomenon: a dynamic process seen from an insider's viewpoint (R. B. Johnson & Onwuegbuzie, 2004). Further, Sydenstricker-Neto (2008, p. 1) claimed that:

Though regression-discontinuity is strong in internal validity and can parallel other non-equivalent designs in terms of validity threats, interpretation of results might be difficult. Outcomes might be the result of combined effects of factors.

Depending on the statistical results, it might also be difficult to assess the study findings comprehensively. Therefore, adding a qualitative approach to the quantitative approach is a good strategy for overcoming some of these problems.

As noted by Sechrest and Sidana (1995), the use of a mixed-method research strategy has the potential to reduce some of the problems associated with using a single method. By utilising quantitative and qualitative techniques within the same framework, mixed-method research can incorporate the strengths of both methodologies. Each of these two data collection methods is described in the following section.

### **4.3 Research Plan**

Both quantitative and qualitative approaches were combined in a single study to enhance the ability of the study to answer the complex research questions posed. To achieve its goals this thesis used a postal questionnaire and face-to-face interviews to gather data for further analysis. The methods used were designed to answer four research questions (RQ 1 to RQ 4). The research plan was, therefore, based on two phases of inquiry. Accordingly, a survey instrument was developed during the first phase, whilst an interview protocol was developed in the second phase.

Initially, experts in the field of local government were consulted and pilot testing undertaken before sending out the questionnaire. First, the draft survey instrument was sent to both academic and practical experts from a university and a local government in the city of Yogyakarta in order to get constructive feedback to improve the questionnaire. Second, the draft was pilot tested with post-graduate students pursuing their master's degree in public sector management. As a result of this process only one minor amendment (see Appendix A.4-1) to the questionnaire was needed. Then a package containing the questionnaire, cover letter, participant information sheet, consent form, and endorsement letter was posted to the targeted

SOs in both types of ILG (district and city) across Indonesia. The main objectives of the survey were:

- To identify the extent of performance indicator development and use in ILG (RQ 1);
- To identify factors affecting the development and use of performance indicators in ILG (RQ 2);
- To identify factors affecting the accountability practices in ILG (RQ 3);
- To recruit voluntary participants from ILG for further data collection process (interview in phase-two of the study).

In phase two, semi-structured interviews were conducted with selected ILG SOs. The interviewees were selected on the basis of the willingness of respondents to volunteer once they had completed the survey. Qualitative data was collected in this interview:

- To obtain evidence as to whether institutional isomorphism existed in the development and use of performance indicators and accountability practice in ILG (RQ 4).

The research process was conducted in several steps as presented in Table 4.1. The first and the most crucial part of the research process is the literature review (presented in detail in Chapter 2). All research questions under investigation in this thesis were developed based on a comprehensive review of the previous literature regarding PMS and accountability discussed in Chapter 2. The next section presents the development of the survey instrument.

**Table 4.1 Research Steps**

<b>Phase One</b>
1. Literature Review
2. Modelling and Hypothesis Development
<b>Phase Two</b>
1. Research Instrument Design and Validation
2. Expert Consultation
3. Pilot Study
4. Revision of Instrument
5. Quantitative Data Collection
6. Quantitative Data Preparation
7. Quantitative Data Analysis
8. Interpretation of Results
<b>Phase Three</b>
1. Interview Protocol Design, Validation and Test
2. Revision of Protocol
3. Qualitative Data Collection
4. Qualitative Data Preparation
5. Qualitative Data Analysis
6. Ethical Considerations
7. Summary

#### 4.4 Quantitative Phase

The research instrument utilised in this thesis was developed and adapted from previous studies in the field of performance measurement and accountability, focusing especially on previous studies of public sector organisations. Table 4.2 presents the constructs used in the model proposed in this thesis (see Appendix A.4-1 for complete survey questions).



**Table 4.2: Constructs Used in the Model**

No.	Construct	Items
1	Development of Indicators	<ol style="list-style-type: none"> <li>1. Input (i.e. labour, material)</li> <li>2. Output (i.e. quantity of products or services provided)</li> <li>3. Outcome (i.e. customer satisfaction)</li> <li>4. Operating efficiency (i.e. cost/unit)</li> <li>5. Benefit (i.e. public/citizen satisfaction)</li> <li>6. Impact (i.e. achievement of social objectives)</li> <li>7. Process (i.e. narrative analysis of performance)</li> </ol>
2	Managerial Use of Indicators	<ol style="list-style-type: none"> <li>1. Setting strategy and program priorities</li> <li>2. Allocating resources</li> <li>3. Adopting new program approaches or changing work processes</li> <li>4. Coordinating program efforts with other internal or external organisations</li> <li>5. Refining program performance measures</li> <li>6. Setting new or revising existing performance goals</li> <li>7. Setting individual job expectations for government employees I manage or supervise</li> <li>8. Rewarding government employees I manage or supervise</li> </ol>
3	Higher Use of Indicators	<ol style="list-style-type: none"> <li>1. Performance measures from my activities are used to develop my LG 's budget</li> <li>2. Funding decisions for my activities are based on performance measures</li> <li>3. Changes by management above my level are based on performance measures</li> </ol>
4	Internal Accountability	<ol style="list-style-type: none"> <li>1. Officials at my level are held accountable for the results of their activities</li> <li>2. Employees in my LG receive positive recognition for helping the LG accomplish strategic goals</li> <li>3. The individual I report to periodically reviews my activity's results with me</li> <li>4. Lack of incentives (e.g. reward, positive recognition) has hindered using performance information</li> </ol>
5	External Accountability	<ol style="list-style-type: none"> <li>1. Organisation-wide policy priorities/goals</li> <li>2. Program goals and objectives</li> <li>3. Program functions and activities</li> <li>4. Program output measures</li> <li>5. Program outcome measures</li> <li>6. Program narrative performance information</li> <li>7. Trends of performance measures</li> <li>8. Comparisons of performance measures</li> </ol>

No.	Construct	Items
6	Metric Difficulties	<ol style="list-style-type: none"> <li>1. Difficulty determining meaningful measures</li> <li>2. Results of our program(s) /operation(s)/ project(s) occurring too far in the future to be measured</li> <li>3. Difficulty distinguishing between the results produced by the program and results caused by other factors</li> <li>4. Difficulty determining how to use performance information to improve the program</li> <li>5. Difficulty determining how to use performance information to set new or revise existing performance goals</li> </ol>
7	Technical Knowledge	<ol style="list-style-type: none"> <li>1. I receive training on development and use of performance measures</li> <li>2. My staff receive training on development and use of performance measures</li> <li>3. I receive published information on how to develop performance measures</li> <li>4. My staff receive published information on how to develop performance measures</li> <li>5. My LG involve external experts or consultants in developing performance measures</li> </ol>
8	Management Commitment	<ol style="list-style-type: none"> <li>1. My institution's top leadership demonstrate a strong commitment to achieving results</li> <li>2. The lack of ongoing top executive commitment or support for using performance information to make program/funding decisions hindered measuring performance or using performance information?</li> <li>3. The lack of ongoing congressional commitment or support for using performance information to make program/funding decisions hindered measuring performance or using performance information?</li> </ol>
9	Legislative Requirements	<ol style="list-style-type: none"> <li>1. I have been involved in my local authority's effort in implementing LAKIP</li> <li>2. My staff has been involved in my local authority's effort in implementing LAKIP</li> </ol>
10	Organisational Capacity	<ol style="list-style-type: none"> <li>1. Management information systems</li> <li>2. Performance-based budgeting</li> <li>3. Capable staffs</li> <li>4. Budgetary surplus</li> </ol>

A brief explanation of all the constructs is provided in the next sections.

#### 4.4.1 Dependent variable constructs

There were five dependent variables (construct numbers 1 to 5) within the model proposed (refer to Figure 3.1). They were: 1) development of performance indicators;

2) managerial use of performance indicators; 3) higher use of performance indicators; 4) internal accountability; and 5) external accountability. The items included within each of the constructs were either adapted from previous studies or included as a result of the researcher recognising a gap in the model.

#### *Development of performance indicators*

In determining the first dependent construct in the proposed model—the development of performance indicators—seven items were adapted and modified from Cavalluzzo and Ittner’s (2004) research. Five items (1, 2, 3, 5, and 6) were modified by using a family of measures derived from LAKIP guidelines. One item (4) was directly taken from Cavalluzzo and Ittner’s (2004) study. The last item (7) was added by the researcher following the review of the literature. This construct reflects the extent of performance indicators developed by ILG.

#### *Managerial use of indicators*

For the second dependent construct—managerial use of indicators—all items used were directly taken from Cavalluzzo & Ittner’s (2004) study. This construct was designed to measure the extent to which performance indicators are used by ILG officials at mid-level.

#### *Higher use of indicators*

As was the case for the second construct above, for the third dependent construct—higher use of indicators—all items used to measure the extent of use of performance indicators by top level management were directly adopted from Cavalluzzo & Ittner’s study.

#### *Internal accountability*

The internal accountability construct was designed to measure the extent of the accountability relationship between superior and subordinate within ILG organisations. All four items used to measure internal accountability were adopted from Cavalluzzo and Ittner’s (2004) study.

### *External accountability*

The external accountability construct was designed to measure the extent of the relationship between ILG organisations and their stakeholders. Wang's (2002) model was used as a template, and the eight items used to measure external accountability were adjusted to suit ILG contexts.

#### **4.4.2 Independent variable constructs**

There were five independent variables identified within the model (refer to Figure 3.1). These were: 1) metric difficulties; 2) technical knowledge; 3) management commitment; 4) legislative requirement; and 5) organisational capacity.

### *Metric difficulties*

The metric difficulties construct was used to measure the level of difficulty experienced by ILG officials in their effort to develop or use performance indicators. Five items were derived from Cavalluzzo and Ittner's (2004) study and used to measure this construct.

### *Technical knowledge*

The technical knowledge construct was used to measure the level of training received by ILG employees and officials in their effort to deal with the complexities related to developing and using performance indicators. Again, the five items required were derived from Cavalluzzo and Ittner's (2004) study.

### *Management commitment*

The management commitment construct was used to measure how intensely top level ILG officials were committed to improving the use of performance information to enhance organisational performance. Three items derived from Cavalluzzo and Ittner's (2004) study were used to measure this construct.

### *Legislative requirements*

This construct was used to measure the extent to which top level officials and their staff have been involved in implementing legislative requirements regarding performance measurement and reporting. The two items used to measure this construct originated from Cavalluzzo and Ittner's (2004) study.

### *Organisational Capacity*

The organisational capacity construct was developed to measure the level of organisational support for the effort to develop and use performance indicators. To measure this construct, four items were adapted from Wang's (2002) study.

### **4.4.3 Translation**

The constructs used to develop the questionnaire deployed in this thesis were initially developed for use in Western countries (Cavalluzzo & Ittner, 2004; Wang, 2002). As the target respondents were Indonesian, all the questions needed to be translated from English into Bahasa Indonesia. There are several techniques to do this, such as direct-translation, back-translation, parallel-translation and mixed technique (Usunier, 1998). This study used the direct-translation method, as it is a relatively simple and straightforward but effective method as long as a qualified and experienced translator is employed. Under this procedure one experienced National Accreditation Authority for Translators and Interpreters (NAATI) certified translator was invited to translate the questions and instructions used in the research instruments. To mitigate the disadvantage of direct-translation, the study conducted a pilot test to ensure that a satisfactory level of reliability was achieved (Sin, Cheung, & Lee, 1999; Usunier, 1998).

### **4.4.4 Quantitative data collection phase: questionnaires**

The survey and follow-up interviews targeted SOs. They were selected as respondents due to their position as officials responsible for administrative and financial affairs (i.e. prepare annual budget and performance report) within their organisations. Hence, their position is very important and central to public

management reforms in ILG. The sample included all ILG authorities throughout Indonesia. Their mailing addresses were obtained from the MoHA website.

As described in Section 4.4 the survey instrument was a combination of questions from Cavalluzzo and Ittner's (2004) and Wang's (2002) studies. The survey consisted of three major sections. Section 1 gathered information about development and use of PMS in ILG. Section Two solicited respondents' views on their understanding and experience of accountability. Section Three collected demographic information (see Appendix A.4-1 for complete questionnaire).

In order to get a relatively high response rate, an endorsement letter obtained from Directorate General of Local Government Affairs of the Indonesian Ministry of Finance accompanied the questionnaire and cover letter (see Appendix A.4-4 for supporting documents of the survey). In order to prevent response bias that might occur as a result of the endorsement, the statement that this study was not sponsored by the Indonesian government was provided, and the researcher was identified as an Indonesian student studying at an Australian University. Return envelopes were provided and directed to Universitas Gadjah Mada in Yogyakarta-Indonesia, with which the researcher is affiliated. Identifiers were placed on the surveys for the purpose of coding only, and confidentiality was ensured in the cover letter.

#### **4.4.5 Quantitative Data Analysis**

To gain rigorous results various statistical tests and analyses were employed in this study. These include validity, reliability and normality tests, descriptive statistic, t-tests, and both first and second-generation multiple regression—OLS and PLS, respectively.

##### **Ordinary least squares**

Over the last decade, the importance of utilising relatively modern statistical approaches to management accounting research has been stressed (Chenhall, 2005). Despite this, a large number of published research studies in this area continue to report statistical analysis based on OLS methods such as multiple regression. That

fact indicated that traditional OLS statistical tools remain relevant. Multiple regression is indeed still the most common form of regression analysis. As a predictive analysis, multiple linear regression is used to describe data and to explain the relationship between one dependent variable and two or more independent variables.

This thesis was designed to test a model regarding PMS and accountability and the factors influencing their use. Multiple regressions would help in conducting the fitness test of the model. The most common goals of multiple regressions are as follows:

1. Describe: Develop a model to describe the relationship between independent variables (explanatory variables) and dependent variables (response variables).
2. Predict: Make predictions by using a set of sample data collected (e.g. from the survey).
3. Confirm: Determine if the contribution of each explanatory variable in the proposed model captures much of the variability in the response variables.

Accordingly, a data set from ILG is used in this thesis to: 1) describe the relationships between five explanatory variables (metric difficulties, technical knowledge, management commitment, legislative requirements, and organisational capacity) and five response variables (development of indicators, managerial use of indicators, higher use of indicators, internal accountability, and external accountability); 2) predict response value from explanatory variables within the range of sample data from ILG; and 3) confirm or reject existing theories by testing the eighteen hypotheses proposed at the beginning of the study.

Before proceeding to further analysis, the final survey instrument was tested for its validity and reliability to determine its feasibility as a good data collection instrument (see Chapter 5, Section 5.3). These tests aimed to minimise survey instrument measurement errors. A normality test was also conducted to enable hypothesis testing using OLS.

### *Validity test*

This test was required to indicate the degree to which a test (i.e. a series of questions and their corresponding scores) captures the underlying construct purportedly measured by the test. A validity test was conducted using a non-parametric bivariate correlation to see whether the score of each question correlated to the score of the construct, confirming its validity. In this study Spearman's correlation was used to ensure the validity of responses (Field, 2009).

### *Reliability test*

A reliability test was conducted to determine how well the final questions on the main survey focused on their corresponding individual construct and provided inter-item consistency. The underlying assumption of this test is that there is only one construct being measured; thus it is appropriate when respondents answer questions in which a 5-point Likert scale is used. An instrument is considered reliable if it shows consistent results. Reliability indicates the accuracy of the instrument. One way to determine the reliability of multi-item variables is by looking at Cronbach's alpha value. It is a measure of the inter-correlations between the various components used to capture the underpinning constructs employed in a model. This test is considered the most appropriate to demonstrate inter-item consistency (Cooper & Schindler, 2006).

### *Normality test*

Before a model equation is considered acceptable, the model's assumptions must first be checked. Models based on OLS require the assumption of normally distributed errors with constant variance. In many statistical tests it is assumed that the sampling distribution is normally distributed. It is for this reason that a normality test was conducted for each of the variables employed for analysis. One way to determine whether a distribution of scores is normal is by checking the value of its skewness and kurtosis (Field, 2009). The histogram and normal probability plot of residuals are used to show whether the data is normally distributed (refer to Section 5.3.3 and Appendix A. 5-1).



### *Hypotheses testing*

In this thesis testing of the hypotheses was undertaken in two stages. The first stage was conducted using OLS or traditional multiple linear regression. A number of sensitivity tests were also undertaken to determine which independent variable, if any, was closely related to the development and use of performance measurement in ILG. In addition to using total revenue as a proxy for size, population and number of employees were tested to determine whether there was any effect on development and use of performance measures. The second test was conducted using PLS (see next section).

The regression model of this research is defined as follows:

$$\begin{aligned}\text{DEV} &= \alpha_1 + \beta_{1.1}\text{MET} + \beta_{1.2}\text{KNO} + \beta_{1.3}\text{COM} + \beta_{1.4}\text{LEG} + \varepsilon \\ \text{USE} &= \alpha_2 + \beta_{2.1}\text{MET} + \beta_{2.2}\text{KNO} + \beta_{2.3}\text{COM} + \beta_{2.4}\text{LEG} + \varepsilon \\ \text{IAcc} &= \alpha_3 + \beta_{3.1}\text{COM} + \beta_{3.2}\text{LEG} + \beta_{3.3}\text{CAP} + \varepsilon \\ \text{EAcc} &= \alpha_4 + \beta_{4.1}\text{COM} + \beta_{4.2}\text{LEG} + \beta_{4.3}\text{CAP} + \varepsilon\end{aligned}$$

*Where:*

DEV = Development of Performance Indicators

USE = Use of Performance Indicators

IAcc = Internal Accountability

EAcc = External Accountability

MET = Metric Difficulties

KNO = Technical Knowledge

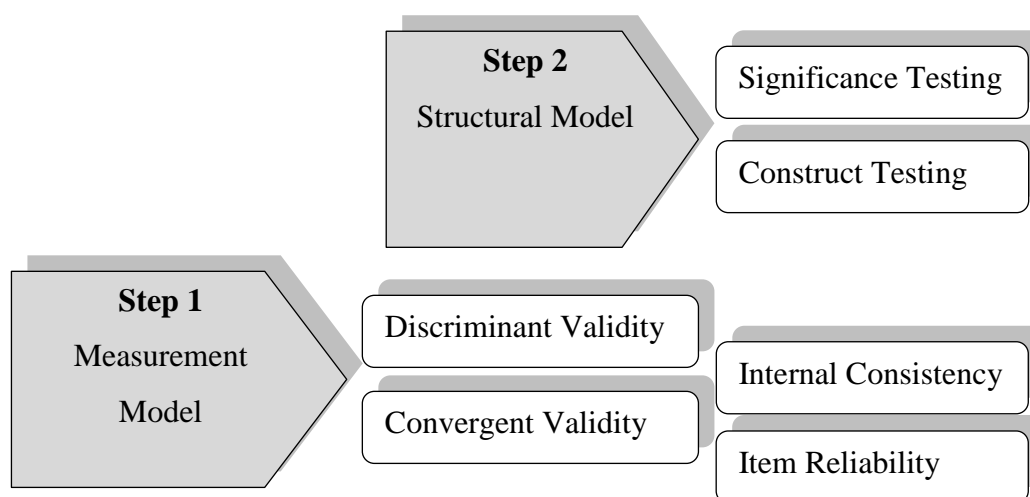
COM = Management Commitment

LEG = Legislative Requirement

CAP = Organisational Capacity

## Partial least squares

Previous scholars detailed the process of evaluating a research model in a two-step approach (see for example, Barclay, Higgins, & Thompson, 1995; Santosa, Wei, & Chan, 2005). Figure 4.1 illustrates the process of the analysis.



**Figure 4.3: PLS Analysis: Two-Step Approach**

### *Estimation method*

There are two types of SEM techniques: covariance-based techniques and variance-based techniques. PLS is the most prominent representative of the latter (Henseler, Ringle, & Sinkovics, 2009). PLS is a second-generation multivariate data analysis technique that allows the simultaneous assessment of reliability and validity whilst also estimating the relationships among constructs (Barclay, et al., 1995).

This analysis is a latent variable modelling technique that incorporates multiple dependent constructs and explicitly recognises measurement error (Fornell, 1982). PLS has been used in a number of accounting studies (Chenhall, 2004, 2005; Anderson, Hesford, & Young, 2002; Vandenbosch, 1999; Ittner, Larcker, & Rajan, 1997), and is particularly suited to this study because it makes minimal data assumptions and requires relatively small sample sizes (Wold, 1985). SmartPLS Rel 2.0 M3 software was utilised in conducting the analysis. In addition, considering the existence of a multiple path relationship between variables within the model, it is

argued here that it would be more appropriate to conduct further analysis. Therefore, in order to gain a rich and more rigorous result, further analysis using PLS was conducted following the analysis using OLS undertaken previously.

#### *Sample size*

Sample size is an important issue in the SEM approach as it has implications for the results of the analysis. Gefen, Straub, & Boudreau (2005) argued that the sample size should be no lower than 10 times the number of items within the most complex construct of model tested. Given the rule, the sample size for this study would need to be a minimum of 80 cases ( $n=8$  items related to managerial use of indicator and external accountability  $\times 10$ ). There are 98 valid responses in this study (refer to Table 5.2). Therefore the minimum number required was exceeded, and thus the data set satisfied the requirement for a sound PLS analysis.

#### *Data examination*

Before proceeding to further data analysis, it was considered appropriate to eliminate any outliers that may produce misleading results (Alrect & Settle, 1995). As such, the data set was scanned on a line-by-line basis to find any errors (i.e. missing data or disordered records). After the scanning, no errors were found and the data set was ready for further PLS procedures. Unlike in OLS regression, PLS regression analysis does not require the data to be normally distributed (Chin, Marcolin, & Newsted, 2003). Consequently, tests for normality such as skewness, kurtosis and Kolmogorov-Smirnov are not necessary.

#### *Measurement model assessment*

##### *Item reliability*

The measurement model of PLS analysis consists of two phases: convergent validity followed by discriminant validity. The first phase is undertaken to assess the model's convergent validity using two measures: individual item reliability and internal consistency (Santosa, et al., 2005). Individual item reliability measures the convergence of each indicator variable on its associated construct. Item reliability is

assessed by examining the loading (i.e. correlations) of the indicator with their respective construct. Convergence, then, is assessed by comparing the loadings with a certain benchmark.

#### *Internal consistency*

The second phase in reliability testing of PLS analysis is measuring the internal consistency of constructs. Composite reliability as used by Fornell and Larcker (1981) was utilised to determine internal consistency. This measure is considered superior to the traditional measure of consistency (Cronbach's alpha) because it does not depend on the number of indicators. Adequate reliability is gained when the composite reliability value is greater than 0.5.

Fornell and Larcker (1981) suggested that convergent validity can also be determined by using a more conservative test, which is achieved by considering the Average Variance Extracted (AVE). This test measures the amount of variance captured by the construct in relation to the amount of variance attributable to measurement error. The AVE should be equal to or exceed a benchmark of 0.5 to be judged adequate.

#### *Discriminant validity*

The third measure in the PLS approach is to test discriminant analysis at both indicator and construct levels using a cross-loading matrix, and then comparing a correlation of the construct and the AVE. This measurement was suggested by Fornell and Larcker (1981). Discriminant validity refers to the extent to which a given construct differs from the others (Hanlon, 2001). Regarding indicator level validity, Barclay et al. (1995) suggested that no indicator variable should load more highly on another construct than it does on the construct it is supposed to measure.

#### *Structural model assessment*

After ensuring that all the criteria were fulfilled for assessing the measurement model, one can proceed to the next step, which is the assessment of the structural model. The structural model examines the relationships between the constructs in the research model. Given the fact that PLS does not assume a normal distribution of

data, it is inappropriate to use traditional tests to ascertain the statistical significance between constructs (Chin, et al., 2003; Hanlon, 2001). Instead, scholars of PLS have developed two non-parametric approaches to test the relationship between variables: jack-knife or bootstrap techniques (Gefen, et al., 2005; Santosa, et al., 2005). In this study bootstrap was used as it is considered to be the more sophisticated approach (Chin, 1998). It provides two measures of the structural model: a t-value (similar to the t-test) and  $R^2$  (interpreted similarly to the traditional multiple regressions analysis). The predictive power of the research model can be assessed by using  $R^2$  stemmed from the output of the bootstrap.

### *Hypotheses testing*

To test the hypotheses, it was necessary to interpret the construct equations with standard errors and test statistics. The construct equations measure the extent to which one factor relates to another, that is, the structural path coefficient and t-values between hypothesised constructs, reflecting direct relationships (Tabachnick & Fidell, 1996). These path coefficients and associated t-values identify and demonstrate the direction and strength of each relationship and, as indicated throughout this chapter, are obtained by using a bootstrapping technique in SmartPLS software. The t-values (robust scores) need to be significant to support the hypothesised paths and should be above 1.64 or 2.33 for alpha protection level of 0.05 and 0.01, respectively (Byrne, 1994; Gefen, et al., 2005).

#### **4.4.6 Pilot Testing of the Survey Instrument**

The survey instrument was pilot tested by using the draft as an in-class survey with three different groups of post-graduate students at Universitas Gadjah Mada, Yogyakarta, Indonesia in July 2008. Most of the students participating were affiliated with different local governments across Indonesia. The pilot tests were administered directly by the researcher. For the sake of clarity, a brief explanation regarding the study was provided to the participants at the beginning before they completed the questionnaire. A discussion session regarding the survey was also provided in each group following the completion of the survey, to collect some feedback. No major changes were needed as most participants had no difficulty completing the survey.

The only change that was required related to the use of negative-style sentences, which, according to the group, created confusion in understanding the point of the questions. In addition to creating confusion for the respondent, following the statistical analysis, the negative questions were also responsible for reliability issues. This was evidenced by a low validity score (Cronbach's  $\alpha < 0.6$ ).

As a result, minor changes were made in the wording of three negative-style statements. To avoid misunderstanding the negative-style statements, these were changed into positive-styles statement (see Appendix A.4-2). The format of the survey instrument mailed to the ILG was an A5 booklet made up of four folded A5 sheets of white paper, printed on both sides.

## **4.5 Qualitative Phase**

### **4.5.1 Qualitative data collection phase interviews**

To gain a deeper insight into performance measurement practices and to determine if isomorphic tendencies existed, in-depth interviews using standardised semi-structured questions were conducted with a sample of ILG. This is a common approach to collecting qualitative data, especially when the study involves investigation of the respondents' experience (Marshall & Rossman, 2006).

Purposive sampling was employed to select participants to be interviewed to enhance the understanding of development and use of performance measurement. Babbie (1990, p.97) stated that "occasionally it might be appropriate for you to select your sample on the basis of your own knowledge of population, its elements, and the nature of your research aims". The sample represented both types of ILG (Districts and Cities) and also of ILG locality (in-Java and out-of-Java). When it comes to the sample size for the interview, Cooper and Schindler (2006, p.203) claim that "sample size for the qualitative research varies by technique but is generally small".

Qualitative data collection was conducted by interviewing 24 selected ILG SOs. The questions were based on the survey results. As well, additional questions (refer to

Appendix A. 4-3) were developed around possible isomorphic pressures. These questions were constructed in order to provide an explanation of the motivation behind the development and use of performance indicators in ILG. Interviews were needed, as the results from the survey only provided some indications regarding the existence of institutional isomorphism during the PMS implementation in ILG. In this sense the survey, as a quantitative approach, was mainly aimed at revealing relationships among variables under investigation and not to explain what is happening in a given context. That goal was achieved, as will be shown in Chapters 5 and 6. Hence, to provide information on the motivations or drivers behind the implementation of PMS, in-depth interviews were required to supplement the survey results (see Chapter 7).

Following contact by phone to make appointments, the interviews were conducted in the premises of the interviewees. On average the interviews lasted for 60 minutes. All interviews were recorded and subsequently transcribed. The data analysis was carried out using thematic content analysis. This is a systematic way of identifying all the main concepts that arise in the interviews, and then trying to categorise and develop those concepts into common themes. Given the relatively small number of interviewees, the data from the interviews was processed manually.

#### **4.5.2 Qualitative Data Analysis**

Qualitative data collected during the interviews was in the form of audio files saved in a digital voice recording device. The audio data was subsequently transcribed by the researcher to convert the data into text data, which enabled the application of text analysis. Thematic content analysis was used to interpret the text data. In this study, themes were identified and built around the main issue under investigation. The main theme included the three components of isomorphism (coercive, mimetic, and normative).

#### **Transcription of data**

Transcription is the process of transforming audio data gathered in the interviews into text documents, which enables the researcher to systematically classify and

analyse the data (Cope, 2009). In this process, the researcher was the only one conducting the transcription. One important reason for doing this was that nobody else could do it as well as the researcher, as all the interviews were directly conducted by him. Cope (2009) points out that conducting self-transcription provides the following benefits to the researcher:

1. Provides an opportunity for the researcher to experience another round of reflection and analysis as the researcher has another chance to listen to and review the talk-based material from the interview;
2. Enhances the researcher's understanding on the topics under investigation, as they are familiar with the context and have already heard it beforehand during the interview process;
3. Enables the researcher to recall (and confirm using key references to written notes taken during the interviews) more of the non-verbal elements of the recorded materials, such as humour, tension, facial expressions, and body language.

All of these benefits contribute to more accurate and richer transcription with additional description and supporting information.

### **Thematic analysis**

Thematic analysis is utilised in this study to assist in transforming qualitative information into manageable and meaningful concepts. The analysis was carried out manually.

This method has been adapted from Glaser and Strauss's (1967) grounded theory approach, and from various scholars' work on content analysis (Babbie, 2007; Glaser & Strauss, 1967). Boyatzis (1998, p.4) pointed out that:

Thematic analysis is a process to be used with qualitative information. It is not another qualitative method but a process that can be used with most, if not all, qualitative methods that allows for the translation of qualitative information into quantitative data, if this is desired by the researcher.

The transcription process merely transforms the audio data collected during the interviews into a bulk of text data. An analytical tool is required to transform the data



into meaningful information. This transformation involves encoding qualitative information and hence requires an explicit code.

A code may be: 1) a list of themes; 2) a complex model with themes, indicators, and qualifications that are causally related; or 3) somewhere between 1 and 2. A theme is a pattern found in the information that at least describes and organises the possible observation and at most interprets aspects of the phenomenon. Themes can be identified directly from the information (manifest level) or from underlying phenomena (latent level). A theme can be generated inductively from the raw information or deductively from theory or prior research.

The reasons for undertaking this analysis are: 1) as a way of seeing; 2) as a way of making sense out of seemingly unrelated material; and 3) as a way of analysing qualitative information. Boyatzis (1998, p.128) further explained that:

Using themes coded from "raw information" is conducive to a verbal description of phenomenon, people, organisations, cultures, or events. Even if the researcher is conducting statistical analysis, aspects of the inquiry and its communication to others can be enriched through use of the qualitative "depth" of the thematic information available.

## **4.6 Ethical Considerations**

Ethical considerations were taken into account in both phases One and Two. Both quantitative and qualitative data collections were conducted in accordance with the ethical rules and regulations outlined by Curtin University. According to the Curtin Human Research Ethics Committee, FORM C is to be completed and approved by the Human Research Ethics Committee. FORM C is designated for "low and negligible risk" research projects. Low risk projects are those in which the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in daily life. In low risk research "participants have the potential to suffer no harm, but where there is potential to suffer only inconvenience or discomfort" (2010, p.1).

This research posed no risk to the people involved. According to the requirements of FORM C, the research method discussed above has been designed to protect the privacy and confidentiality of the information obtained through the research. Names of the key person were sought with a formal request in accordance with the appropriate ethical requirements as stipulated by Curtin University. Form C (Application for Approval of Research with Low Risk) was completed prior to the ethics approval.

This research was conducted using both survey and interviews in the process of data collection. The interviews were conducted as a follow-up to the original survey. Interviewees were asked to sign a consent form after being provided with a copy of a Participant Information Sheet (see Appendix A.4-5). This information sheet detailed, amongst other things, the promise of complete confidentiality. Interviews were recorded with permission of the interviewee. This information was explicitly stated on the consent form. The information sheet emphasised that information participants provided would be treated in the strictest confidence. Only the aggregate results of the interviews were used and no individual or council details would be identified. In line with this requirement the name of each Kabupaten or Kota (ie. local government) presented in this thesis was replaced by a code using a combination of the letter K and a number (i.e. K12).

## **4.7 Summary**

This chapter detailed the research design of this thesis. The next three chapters discuss data analysis employed in this thesis. The first stage of quantitative data analysis using OLS is presented in Chapter 5. Chapter 6 presents the second stage of quantitative data analysis using PLS. Qualitative data analysis using thematic content analysis is covered in Chapter 7.

## **Chapter 5: Quantitative Analysis Part 1**

### **5.1 Introduction**

This chapter provides statistical analysis of data from the survey of SOs in Indonesian local government regarding the development and use of performance indicators. OLS regression was used to provide evidence about organisational and technical factors and their relationships with the extent of performance indicator development and the use in ILG. It does so in line with the main objectives of this research, and in consideration of the literature reviewed in Chapter 2. To perform the statistical analysis, SPSS 15.0 for Windows was employed. The software package is well recognised and widely used in social and behavioural science, as well as in management and accounting research. Both this chapter and Chapter 6 consider the results of the survey as the first stage of the study. Chapter 7 presents the second stage of the research.

Section 5.2 presents general information about the survey whilst Section 5.3 details validity, reliability, and normality tests. Section 5.4 provides measurement and profiles of both dependent and independent variables. A comparison of ILGs along with supporting t-test results is presented in Section 5.5 and 5.6, respectively. Finally, Section 5.7 provides the OLS regression to hypothesise the effects of independent variables on the development and use of performance indicators.

### **5.2 The Survey**

This section describes the response rate, the non-response bias, and demographic information pertaining to the respondents.

#### **5.2.1 Response rate**

Surveys were sent to the SOs responsible for performance reporting in all local governments across Indonesia. As of 2008, there were 457 ILGs. This total included 211 ILGs that were newly established because of the districts' and cities' separation processes over the previous five years following the reform era. Table 5.1 presents

the distribution of responses from the survey. Of the 457 surveys sent, a response rate of 21.9% (100 surveys) was achieved. Senior local officials are normally very busy in their day-to-day managerial duties and the majority of them are not interested in research. This could partly explain the relatively low response. However, low responses are not unusual in mailed-surveys involving not-for-profit and government officials as respondents (e.g., Kluvers & Tippet, 2010; Olson, 2000; Sheehan, 1996). Due to invalid data, two responses were ineligible for further analysis and thus excluded. Consequently, 98 usable responses, equivalent to a 21.4% effective response rate, were analysed.

**Table 5.1: Distribution of Responses**

	Sent (457)		Received (100)		Response rate (21.9%)
	Frequency	%	Frequency	%	
<i>Location</i>					
In-Java	115	25.2	44	44.0	38.3%
Out-of-Java	342	74.8	56	56.0	16.4%
	457	100	100	100	
<i>Type</i>					
Districts	362	79.2	78	78.0	21.5%
Cities	95	20.8	22	22.0	23.2%
	457	100	100	100	

*Note:* Due to invalid data, two responses were excluded and 98 were further analysed

Among the respondents, 44 were from Java with 56 from outer-Java. Most respondents (78%) came from districts and only 22% came from cities. When comparing the response rate of local government by type, the sample was relatively comparable. Table 5.1 shows that response rates from districts and cities is 21.5% and 23.2%, respectively. With regard to location, there was a 16.4% response rate from out-of-Java, whilst that from in-Java was 38.3%. These figures are very close to the percentage of the number of districts and cities in Indonesia, thus providing a good representation of the entire population.

The relatively low response rate can be explained by a further two factors. First, lack of experience in performance reporting of the 211 newly established local

governments was the most likely reason for not responding. This explanation was supported by the fact that almost all responses came from local governments in existence long before the reform era (old local governments). This possible reason was explored further in the interview phase. Second, in an Indonesian context, very low responses are normally expected from local, out-of-Java governments.

### **5.2.2 Non-response bias**

Subjects of this study were all from local governments, situated within 33 provinces with a total population of 237 million.<sup>18</sup> The survey was distributed in mid-September 2008. Mail surveys are determined to be an appropriate method for collecting data in a community-based study. This method is particularly useful for research involving large and/or geographically dispersed populations such as those in Indonesia. Using this method of collecting data increases the coverage of the study and decreases the time necessary to conduct the survey in a cost-effective manner. Therefore, this method was suitable in this kind of study with a sample of respondents spread over a geographically large and dispersed region (McDonald & Adam, 2003).

Researchers must exercise care in appropriately addressing the issue of non-response bias; otherwise the results of the study could not be generalised. One way to deal with the non-response bias issue is by using the extrapolation method. This method is based on the assumption that subjects who respond less readily are more like non-respondents (Pace, 1939 in Armstrong & Overton, 1977). Armstrong and Overton (1977, p. 397) claimed that:

The most common type of extrapolation is carried over successive waves of implementing a questionnaire. Wave refers to the response generated by a stimulus (i.e. follow-up questionnaires). SOs who respond in later waves are assumed to have responded because of the increased stimulus and are expected to be similar to non-respondents.

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<sup>18</sup> Data gathered from Indonesian Bureau of Statistic ([www.bps.go.id](http://www.bps.go.id)) as of 2010

Of the responses, 11.8% were received within a month after the questionnaires were sent as shown in Table 5.2 below. To increase the response rate, in December 2008, 30 questionnaires were resent to those ILGs that did not respond to the initial mailing. Of the 30 questionnaires resent, fourteen were returned from January to February 2009.

**Table 5.2: Times of Responses**

Period	Frequency	Percentage of response (%)
October	54	11.8
November	32	7.0
Jan and Feb *	14	3.1
Total	100**	21.9

*Legend:* \* after follow-up questionnaire sent in December 2008, \*\* 2 unusable and excluded (from October)

To ensure that there was no response bias, the fourteen late responses were then compared to the 84 earlier responses using the Mann-Whitney test (Field, 2009). Table 5.3 provides the results from the test.

**Table 5.3: Mann-Whitney Test Results**

Variables	Time of Response	Mean Rank	Sig. (2-tailed)
Development	1	50.07	0.935
	2	49.40	
Managerial Use	1	49.36	0.984
	2	49.52	
Higher Use	1	46.39	0.654
	2	50.02	
Internal Accountability	1	45.75	0.591
	2	50.13	
External Accountability	1	57.11	0.256
	2	48.23	
Metric Difficulties	1	50.29	0.278
	2	44.79	
Technical Knowledge	1	49.68	0.922
	2	48.89	
Management Commitment	1	50.75	0.857
	2	49.29	
Legislative Requirements	1	50.14	0.924
	2	49.39	
Organisational Capacity	1	57.29	0.264
	2	48.20	

*Legend:* 1= October-November 2008, 2= January-February 2009

Table 5.3 shows that for all variables employed in this study, the mean ranks between earlier and later responses were not very different, and for all variables, the difference was not significant as evidenced in the last column of the table (P-value > 0.05). Therefore, analysis of responses to the second wave of returns revealed no significant difference from the earlier wave of responses. Consequently, it can be concluded that there are no issues of response bias; hence, the generalisation of results is not compromised.

### **5.2.3 Demographic information**

The demographic information of the respondents is summarised in Table 5.4, which shows that only 9.2% of the respondents were female and 88.8% were male. These figures are representative of the population of the study given the fact that the percentage of female SOs in Indonesian civil service is only 9.5% as shown in Table 5.5.

Of the respondents, 5.1% did not answer the questions on age. Of those that did, the majority (81.6%) were over 40 years of age. With regard to the respondents' education, only 2% had a background in accounting. However, 64.3% had a post-graduate degree in management with the remaining 33.7% having an undergraduate/bachelor degree in various fields—mainly in the social sciences. Concerning the workforce, 76.6% had worked in local government for more than eleven years. This was expected, as the respondents were senior officers; the figure confirmed that the respondents had appropriate knowledge to complete the questionnaires they received.

**Table 5.4: Demographic Information of Respondents (N=98)**

Characteristics		Frequency	Percentage
Gender	• Female	9	9.2%
	• Male	87	88.8%
	• Missing	2	2.0%
Age Group	• <30	1	1.0%
	• 30–40	12	12.2%
	• 41–50	36	36.7%
	• >50	44	44.9%
	• missing	5	5.1%
Education Level	• Undergraduate	33	33.7%
	• Post-graduate	63	64.3%
	• Missing	2	2.0%
Field Background	• Accounting	2	2.0%
	• Others	87	88.8%
	• Missing	9	9.2.%
Work Experience	• < 2	1	1.0%
	• 2–5	3	3.1%
	• 6–10	6	6.1%
	• 11–15	32	32.7%
	• >15	43	43.9%
	• missing	13	13.3%
Type	• District	76	77.6%
	• City	22	22.4%
Location	• in-Java	43	43.9%
	• out-of-Java	55	56.1%

**Table 5.5: Civil Servants Composition**

Echelon	Gender		Total
	Male (No/%)	Female (No/%)	
1	619 (90.5)	65 (9.5)	684
2	10,671 (93.4)	750 (6.6)	11,421
3	46,770 (86.8)	7,096 (13.2)	53,866

Source: Badan Kepegawaian Negara (State Employment Agency) [www.bkn.go.id](http://www.bkn.go.id)

## 5.3 Test of Validity, Reliability, and Normality

### 5.3.1 Validity

The construct validity test is required to indicate the degree to which a test (i.e. a series of questions and their corresponding scores) captures the underlying construct



purportedly measured by the test. A validity test was conducted using a non-parametric, bivariate correlation to see whether the score of each question correlated to the score of the construct in order to be valid (Field, 2009). Table 5.6 (on the next page) provides the results from conducting Spearman correlations on the variables used in this study.

Results determined that 95% of the associations were significant at the 5% level or better (two-tailed). Table 5.6 shows that correlation between development and managerial use of indicators had a relatively high score (0.654), but it was still well below the cut-off point of 0.8 (Field, 2009).<sup>19</sup> This indicates that the development of performance indicators and their managerial use were strongly and positively related to each other. Out of five independent variables tested, four variables—technical knowledge, management commitment, legislative requirements, and organisational capacity—had a relatively strong correlation (range from 0.219 to 0.610) to their respective dependent variables, while metric difficulty was the only variable that had a relatively weak and negative correlation to the dependent variables. This significant correlation between core variables in the model was needed for further analysis, especially in testing hypotheses using multiple regressions, reported later in this chapter. Given the results, core variables were ready and appropriate for further hypotheses testing.

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<sup>19</sup> For details discussion see Field, 2009 *Discovering Statistics Using SPSS*, page 179-181

**Table 5.6: Spearman Correlations Coefficient**

	1	2	3	4	5	6	7	8	9	10
1. Development	1									
2. Managerial Use	.654**	1								
3. Higher Use	.482**	.589**	1							
4. Internal Accountability	.422**	.536**	.625**	1						
5. External Accountability	.480**	.546**	.408**	.608**	1					
6. Metric Difficulties	-.282**	-.250*	-.102	-.094	-.076	1				
7. Technical Knowledge	.506**	.558**	.346**	.465**	.531**	-.160	1			
8. Management Commitment	.578**	.735**	.473**	.576**	.610**	-.230*	.524**	1		
9. Legislative Requirements	.501**	.543**	.351**	.493**	.487**	-.044	.524**	.505**	1	
10. Organisational Capacity	.192	.146	.182	.219*	.474**	.103	.290**	.347**	.148	1

*Legend:*

\*\* Correlation is significant at the 0.01 level (2-tailed). \* Correlation is significant at the 0.05 level (2-tailed).

### 5.3.2 Reliability

This study used Cronbach's alpha coefficient as the most popular reliability test. Table 5.7 presents the results of the test.

**Table 5.7: Cronbach Alpha Coefficient**

Variables	Coefficient
1. Development	0.869
2. Managerial Use	0.907
3. Higher Use	0.857
4. Internal Accountability	0.792
5. External Accountability	0.947
6. Metric Difficulties	0.901
7. Technical Knowledge	0.788
8. Management Commitment	0.890
9. Legislative Requirements	0.838
10. Organisational Capacity	0.725

As shown in Table 5.7, all variables show a high coefficient alpha, ranging from 0.725 to 0.947, much higher than 0.6, the minimum level suggested by Nunnally (1967), for adequate construct reliability. Hence, the final questionnaire utilised in this main survey was reliable.

### 5.3.3 Normality

Table 5.8 provides test results regarding normality of data. It shows that the distribution of score values of skewness (-0.943 to -0.57) were relatively close to zero (perfect normality), which meant that the data could be considered normally distributed.

A histogram and a P-P plot (see Appendix A.5-1) can also be used to visually observe normality of data (Field, 2009). From these observations, it was concluded that the data regarding all core variables employed in this study were normally distributed. Therefore, no data transformation was required and all the core variables were ready for further statistical procedures (i.e. t-test and multiple regression tests).

**Table 5.8: Normality Test**

	1	2	3	4	5	6	7	8	9	10
N	98	98	98	98	98	98	97	98	98	98
Mean	3.4480	3.3712	3.3946	3.6735	3.9775	3.2224	3.1943	3.7959	4.0816	3.7194
Std. Deviation	.69480	.72320	.88690	.78024	.72535	.79529	.70081	.83266	.70599	.66510
<b>Skewness</b>	<b>-.769</b>	<b>-.696</b>	<b>-.507</b>	<b>-.617</b>	<b>-.943</b>	<b>.061</b>	<b>-.368</b>	<b>-.725</b>	<b>-.543</b>	<b>-.057</b>
Std. Error of Skewness	.244	.244	.244	.244	.244	.244	.245	.244	.244	.244
<b>Kurtosis</b>	<b>1.207</b>	<b>.644</b>	<b>.273</b>	<b>.631</b>	<b>1.422</b>	<b>-.072</b>	<b>.044</b>	<b>.257</b>	<b>-.160</b>	<b>-.113</b>
Std. Error of Kurtosis	.483	.483	.483	.483	.483	.483	.485	.483	.483	.483
Minimum	1.14	1.13	1.00	1.00	1.25	1.20	1.40	1.33	2.00	2.00
Maximum	5.00	4.88	5.00	5.00	5.00	5.00	4.80	5.00	5.00	5.00

*Legend:*

1= Development, 2= Managerial Use, 3= Higher Use, 4= Internal Accountability, 5= External Accountability, 6= Metric Difficulty, 7= Technical Knowledge, 8= Management Commitment, 9= Legislative Requirements, 10= Organisational Capacity

## 5.4 Measurement and Profile of Variables

Respondents were requested to provide their assessments on all variables in the model. A scale (1=no extent, 2=small extent, 3=moderate extent, 4=great extent, 5=very great extent) was used to measure the assessment. The results are provided in Tables 5.9 to 5.17.

### 5.4.1 Development of performance indicators

Table 5.9 presents an overall descriptive profile of how the SOs rated performance indicator development. As indicated in the table, amongst all types of indicators, the output indicator was the most developed with 68% (54.6%+13.4%) of respondents having replied to a great or very great extent. This finding is higher than that found by Cavalluzzo and Ittner (2004) in the United States with only 60.8%.

**Table 5.9: SOs' Ratings for Development of Indicators**

Types of indicators	1	2	3	4	5	MN	SD
1. Input	2.0%	8.2%	27.6%	45.9%	16.3%	3.66	0.92
2. Output	1.0%	5.2%	25.8%	54.6%	13.4%	<b>3.74</b>	0.79
3. Outcome	3.1%	12.2%	35.7%	41.8%	7.1%	3.38	0.90
4. Efficiency	2.0%	11.2%	41.8%	37.8%	7.1%	3.37	0.85
5. Benefit	3.1%	14.4%	35.1%	39.2%	9.3%	3.38	0.94
6. Impact	4.1%	18.4%	26.5%	41.8%	9.2%	3.34	1.01
7. Process	4.1%	14.3%	37.8%	36.7%	7.1%	3.29	0.94
Total (N=98)						3.45	0.69

Process and efficiency indicators were the least developed indicators with 43.8% and 44.9%, respectively. As shown in Table 5.9, performance-based indicators (i.e. outcome) were much lower than output indicators. This finding indicated that even though performance-based budgeting had been in place for a decade, outcome indicators had not been developed as expected.

### 5.4.2 Use of performance indicators

Table 5.10 shows the survey results regarding the use of performance indicators both for managerial and higher level use. SOs stated that they used performance indicators mainly for managerial purposes, depending upon the type of indicator. The results

showed that the lowest managerial use for performance indicators in ILG was rewarding employees at 32.6% and the highest use was setting strategy at 66.3%.

**Table 5.10: SOs' Ratings for Use of Indicators**

Types of Use	1	2	3	4	5	MN	SD
<i>Managerial Use</i>							
1. setting strategy	2.0%	8.2%	23.5%	49.0%	17.3%	<b>3.71</b>	0.92
2. allocating resources	4.1%	9.2%	21.4%	51.0%	14.3%	3.62	0.98
3. adopting new program	3.1%	19.4%	36.7%	37.8%	3.1%	3.18	0.89
4. coordinating program	2.0%	7.1%	28.6%	45.9%	16.3%	3.67	0.91
5. refining program	3.1%	13.3%	40.8%	34.7%	8.2%	3.32	0.91
6. setting performance goal	4.1%	20.4%	35.7%	36.7%	3.1%	3.14	0.92
7. setting job expectation	2.0%	19.4%	34.7%	36.7%	7.1%	3.28	0.93
8. rewarding employees	4.1%	26.5%	36.7%	26.5%	6.1%	3.04	0.97
Total (N=98)						3.37	0.72
<i>Higher Use</i>							
1. Develop budget	7.1%	16.3%	36.7%	32.7%	7.1%	3.16	1.02
2. Funding decisions	3.1%	13.3%	26.5%	42.9%	14.3%	3.52	1.00
3. Changes management	4.1%	12.2%	25.5%	45.9%	12.2%	3.50	1.00
Total (N=98)						3.39	0.89

For higher level decisions, 57.2% of the respondents indicated that they used performance indicators extensively for funding decisions and 58.1% for change management purposes. However, only 39.8% of the respondents believed that results-oriented performance information had a major influence on local government budgets. There was a low percentage of use of performance indicators for developing budgets, given the fact that ILGs had been implementing performance-based budgeting for a decade. This indicated that performance indicators had not been well integrated into the budgeting systems.

### 5.4.3 Accountability

Table 5.11 shows the survey results regarding the extent of internal accountability in ILG, whilst the results for external accountability are provided in Table 5.12.

**Table 5.11: SOs' Ratings for Internal Accountability**

	1	2	3	4	5	MN	SD
1. Officials at my level are held accountable for the results of their activities.	4.2%	4.2%	10.5%	45.3%	35.8%	<b>4.04</b>	1.010
2. Employees in my LG receive positive recognition for helping the LG accomplish strategic goals.	4.1%	8.2%	31.6%	41.8%	14.3%	3.54	.976
3. The individual I report to periodically review my activity's results with me.	3.1%	8.2%	27.6%	49.0%	12.2%	3.59	.918
4. The existence of incentives (e.g. reward, positive recognition) has encouraged using performance information.	3.1%	15.3%	25.5%	38.8%	17.3%	3.52	1.048
Total (N=98)						3.67	0.780

The questionnaire requested SOs to provide assessments on a list of content descriptors of performance reporting as they applied to their institutions. The list included organisation-wide policy priorities/goals; goals and objectives of the program; functions and activities; output and outcome indicators of the program, narrative performance information about the program; trends of performance indicators; and comparison of performance indicators.

**Table 5.12: SOs' Ratings for External Accountability**

	1	2	3	4	5	MN	SD
1. ILG priorities/goals	1.0%	3.1%	8.3%	43.9%	43.9%	4.27	.82
2. Program's goal & objectives	0.0%	3.1%	8.2%	46.9%	41.8%	4.28	.74
3. Program's function	1.0%	5.1%	10.2%	53.1%	30.6%	4.07	.84
4. Output indicators	0.0%	3.1%	19.6%	38.1%	39.2%	4.13	.84
5. Outcome indicators	1.0%	4.1%	25.8%	39.2%	29.9%	<b>3.93</b>	.90
6. Narrative information	1.0%	6.1%	22.4%	51.0%	19.4%	<b>3.82</b>	.85
7. Trend of indicator	1.0%	8.2%	29.0%	48.0%	13.3%	<b>3.64</b>	.85
8. Comparison of indicators	2.0%	8.2%	27.6%	44.9%	17.3%	<b>3.67</b>	.93
Total (N=98)						3.67	.78

A majority of ILGs provided more general information in their accountability reporting. As shown in Table 5.12, information related to ILGs' priorities and program goals/objectives sat at the top of the list to which respondents stated their agreement at 87.8% and 87.7%, respectively. Table 5.12 also shows an interesting result where item numbers 5 to 8 (information related to performance indicators)

have a relatively lower mean (bolded) than items 1 to 4 (more general information). Given that ILGs had implemented performance-based budgeting where performance indicators become the core elements, this result was unexpected. As such, the unexpected results indicated the existence of barriers in performance indicator development and in practical use.

#### 5.4.4 Metric difficulties

With regard to metric difficulties, several factors (F1 to F5) hindered the development and use of performance indicators in ILG:

1. Difficulty determining meaningful measures
2. Results of our program(s)/operation(s)/project(s) occurring too far in the future to be measured
3. Difficulty distinguishing between the results produced by the program and results caused by other factors
4. Difficulty determining how to use performance information to improve the program
5. Difficulty determining how to use performance information to set new or revise existing performance goals

The survey results regarding metric difficulties are shown in Table 5.13.

**Table 5.13: SOs' Ratings for Metric Difficulties**

Factors	1	2	3	4	5	MN	SD
F1.	1.0%	14.3%	38.8%	31.6%	14.3%	<b>3.44</b>	.94
F2.	0.0%	18.4%	43.9%	29.6%	8.2%	3.28	.86
F3.	3.1%	22.4%	32.7%	33.7%	8.2%	3.21	.99
F4.	3.1%	26.5%	33.7%	30.6%	6.1%	3.10	.97
F5.	2.0%	27.6%	36.7%	27.6%	6.1%	3.08	.94
Total (N=98)						3.22	.79

Table 5.13 shows that difficulty determining meaningful measures (factor 1) was the most influencing factor that hindered development and use of performance indicators. This was supported by 45.9% of the respondents indicating that they had problems in understanding and defining performance indicators.



### 5.4.5 Technical knowledge

Technical knowledge is defined here as the ability of ILG employees and officials to develop and use performance indicators. Several factors have an impact on the process of developing and using performance indicators in ILG.

The factors (F1 to F5) are as follows:

1. Training for SOs on development and use of performance indicators
2. Training for staff on development and use of performance indicators
3. Published information for SOs on how to develop performance indicators
4. Published information for staff on how to develop performance indicators
5. External experts or consultants involvement in developing performance indicators

**Table 5.14: SOs' Ratings for Technical Knowledge**

Factors	1	2	3	4	5	MN	SD
F1.	4.2%	15.8%	43.2%	29.5%	7.4%	3.20	.94
F2.	4.1%	14.4%	37.1%	41.2%	3.1%	3.25	.89
F3.	1.0%	15.5%	36.1%	36.1%	11.3%	<b>3.41</b>	.92
F4.	2.1%	21.6%	30.9%	36.1%	9.3%	3.29	.98
F5.	9.3%	32.0%	30.9%	23.7%	4.1%	2.81	1.03
Total (N=98)						3.19	.70

Published information (i.e. guidelines from central government regarding performance indicator development) was beneficial in assisting ILG to develop performance indicators. Table 5.14 shows that 47.4% of the respondents stated that published information received by SOs assisted them to a "great" and "very great" extent in developing performance indicators.

### 5.4.6 Management commitment

Table 5.15 presents the extent to which some forms of organisational commitment assisted in developing and using performance indicators. The forms (F1 to F3) of organisational commitment used were as follows: 1) Existence of leadership, 2) Executive support, and 3) Legislative support.

**Table 5.15: SOs' Ratings for Management Commitment**

Forms	1	2	3	4	5	MN	SD
F1.	1.0%	5.1%	14.3%	38.8%	40.8%	<b>4.13</b>	.91
F2.	1.0%	7.1%	23.5%	49.0%	19.4%	3.79	.88
F3.	3.1%	13.3%	28.6%	43.9%	11.2%	3.47	.96
Total (N=98)						3.80	.83

Table 5.15 indicates that the existence of leadership was crucial to the success of developing and using performance indicators in ILG. This was evidenced by a very high percentage (79.6%) of respondents stating a "great" and "very great" extent to that form of commitment.

#### **5.4.7 Legislative requirements**

In this research, the intensity of SO and staff involvement in LAKIP-related activities was used as a proxy for legislative requirements. Table 5.16 presents evidence that SOs involvement in implementing LAKIP was higher than that of staff. The percentages were 81.7% and 78.6%, respectively.

**Table 5.16: SOs' Ratings for Legislative Requirements**

	1	2	3	4	5	MN	SD
SO involvement	0.0%	2.0%	16.3%	49.0%	32.7%	<b>4.12</b>	.75
Staff involvement	0.0%	3.1%	18.4%	50.0%	28.6%	4.04	.77
Total (N=98)						4.08	.71

#### **5.4.8 Organisational capacity**

With regard to organisational capacity, the SOs stated their assessment on four questions reflecting organisational capacity as the pre-condition for accountability reporting in their institution. Table 5.17 shows the results.

**Table 5.17: SOs' Ratings for Organisational Capacity**

Driver	1	2	3	4	5	MN	SD
Management information systems	0.0%	7.1%	18.4%	49.0%	25.5%	3.93	.85
Performance-based budgeting (PBB)	0.0%	3.1%	6.1%	49.0%	41.8%	<b>4.30</b>	.72
Staff capability	2.0%	9.2%	25.5%	46.9%	16.3%	3.66	.93
Budgetary surplus	7.2%	24.7%	41.2%	16.5%	10.3%	2.98	1.06
Total (N=98)						3.72	.66

A majority of respondents believed that PBB was the most important driver for accountability reporting. As shown in Table 5.17, 90.8% of the respondents stated their agreement. This indicated that the implementation of PBB in ILG had encouraged ILG to provide accountability reports. However, given the fact that information related to performance indicators was not extensively provided in the reports, the influence of PBB, so far, may still be at a rudimentary level.

## 5.5 Comparison of Indonesian Local Governments

An initial analysis using descriptive statistics was conducted with results presented here. Further analysis, using independent t-tests, is presented in Section 5.6.

### 5.5.1 By type

This section examines the mean comparison between respondents from cities (urban government with typically more dense populations) and districts (rural government with less dense populations), as provided in Table 5.18. Responses from cities, for all core variables, showed relatively higher means than those from districts.

**Table 5.18: Comparison by Type**

Variables	City (n=22)		District (n=76)		Total (n=98)	
	Mean	SD	Mean	SD	Mean	SD
1. Development	3.75	.45	3.36	.73	3.45	.69
2. Managerial Use	3.62	.58	3.30	.75	3.37	.72
3. Higher Use	3.74	.62	3.29	.93	3.39	.89
4. Internal Accountability	3.84	.62	3.62	.82	3.67	.78
5. External Accountability	4.07	.71	3.95	.73	3.98	.73
6. Metrics Difficulties	3.29	.77	3.20	.81	3.22	.79
7. Technical Knowledge	3.45	.58	3.12	.72	3.19	.70
8. Management Commitment	3.96	.70	3.75	.86	3.80	.83
9. Legislative Requirements	<b>4.36</b>	.54	<b>4.00</b>	.73	4.08	.71
10. Organisational Capacity	3.70	.65	3.72	.67	3.72	.67

With regard to implementation factors (metric difficulties, technical knowledge, management commitment, and legislative requirements), the relatively higher mean scores for legislative requirements (in bold) in both types of governments was the key concern. This implied that issues surrounding central government regulations, in general, remained crucial as a primary concern for local government managers, despite the fact that decentralisation has been in place for about a decade. This table also shows that cities' mean (4.36) is higher than districts' mean (4.00). The result implied that officers in cities were more concerned about the issues than were those from districts.

### 5.5.2 By location

Table 5.19 presents mean comparisons between respondents from Java as the main, and most populated, island and the rest of the islands spread over the Indonesian archipelago. As can be seen, for all core variables, responses from Java showed a relatively higher mean than those from outer-Java. With regard to implementation factors, again, the relatively higher mean scores for legislative requirements (in bold) found both in-Java and out-of-Java was the key concern.

**Table 5.19: Comparison by Location**

Variables	In-Java		Out-of-Java		Total	
	(n=43)		(n=55)		(n=98)	
	Mean	SD	Mean	SD	Mean	SD
1. Development	3.65	.58	3.29	.74	3.45	.69
2. Managerial Use	3.46	.63	3.30	.79	3.37	.72
3. Higher Use	3.58	.79	3.25	.94	3.39	.89
4. Internal Accountability	3.57	.80	3.80	.74	3.67	.78
5. External Accountability	3.98	.80	3.98	.63	3.98	.73
4. Metrics Difficulties	3.27	.82	3.18	.78	3.22	.79
5. Technical Knowledge	3.44	.59	3.00	.73	3.12	.70
6. Management Commitment	3.81	.77	3.79	.89	3.80	.83
7. Legislative Requirements	<b>4.23</b>	.63	<b>3.96</b>	.74	4.08	.71
10.Organisational Capacity	3.70	.68	3.74	.65	3.72	.67

Again, this indicates that issues on central government regulations, in general, remained important as a primary concern for local government managers, despite the fact that decentralisation had been in place for a long period. This table also shows that in-Java's mean (4.23) was higher than out-of-Java's mean (3.96). This implied that in-Java officers were more concerned about the issues than were those from out-of-Java.

### 5.5.3 By size

Table 5.20 presents comparison between small (up to IRD 500,000 millions) and large ILG (more than IRD 500,000 millions). The revenue data were gathered from the website of the Ministry of Finance Affairs (MoFA). The data were downloaded on 13 October 2009. For the purpose of this analysis, the questionnaires were coded in order to identify a certain ILG.<sup>20</sup>

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<sup>20</sup> This was explained to all participants and approved by Curtin University Ethics Committee (refer to Chapter 4)

**Table 5.20: Comparison by Size**

Variables	Small (n=49)		Large (n=49)		Total (n=98)	
	Mean	SD	Mean	SD	Mean	SD
1. Development	3.41	.74	3.48	.65	3.45	.69
2. Managerial Use	3.27	.83	3.46	.59	3.37	.72
3. Higher Use	3.33	.98	3.45	.80	3.39	.87
4. Internal Accountability	3.60	.86	3.75	.70	3.67	.78
5. External Accountability	3.98	.86	3.98	.57	3.98	.73
4. Metrics Difficulties	<b>3.27</b>	.77	<b>3.16</b>	.82	3.22	.79
5. Technical Knowledge	3.08	.77	3.31	.61	3.19	.70
6. Management Commitment	3.78	.91	3.80	.77	3.80	.83
7. Legislative Requirements	4.04	.80	4.10	.59	4.08	.71
10. Organisational Capacity	3.70	.66	3.74	.67	3.72	.67

A slightly different result was found when comparing the means between different sizes of government. Larger LGs tended to have a higher mean than did the small ones for most variables except metric difficulties (in bold, smaller ILGs claimed metric difficulties had more impact on development and use of performance indicators). This indicated that the extent of development and use of performance measures in larger ILGs was higher than it was in smaller ILGs.

## 5.6 Independent t-Tests for Control Variables

To provide statistical support to the above section, an independent t-test was employed for the three control variables in the model. The summary of results for the independent t-test for all control variables is presented in Tables 5.21 and 5.22.

### 5.6.1 By type

The results of the independent sample t-test for both types of ILGs and for the five dependent variables were mixed. For development of indicators and higher use of indicators, the test revealed a score of 0.022, and 0.036, respectively (see Table 5.21). Hence, there was a significant difference between districts and cities with regard to development and higher use of indicators. In Indonesia, cities developed and used performance indicators at a higher level more extensively than the districts did. This implies that ILGs situated in urban areas, which generally have a high

population, developed, and used more performance indicators than did those situated in rural areas. This was not unexpected given that ILGs in densely populated urban areas tend to deal with heterogeneous and complex issues regarding public service activities. In addition, people in urban areas tend to be more demanding than were those in rural areas. Hence, those ILGs need to provide more indicators in order to respond to the demands.

In addition, cities usually have better resources (human resources, information technology, etc.) than districts. Interestingly, according to Van Dooren (2005), a lack of resources does not affect either development or use of performance indicators. However, unlike Van Dooren's claim, the finding of this study indicated that lack of resources did affect development of indicators but did not affect the use of performance indicators (refer to Chapter 8 for more discussion).

With regard to accountability (both internal and external), the test revealed a score of 0.255 and 0.508 respectively (see Table 5.22). This indicated that there was no difference in the levels of accountability practices between types of ILGs.

### **5.6.2 By location**

The results of an independent sample t-test for different locations of ILGs and the five dependent variables were also mixed. The in-Java ILG was found to develop more indicators than that of out-of-Java, with a t-test score of 0.007 (see Table 5.21). Meanwhile, the scores for use of indicators (both managerial and higher) were 0.273 and 0.065, respectively (not significant). This indicated that in-Java ILGs tended to develop more performance indicators than out-of-Java ones. However, all ILGs used performance indicators at relatively the same level regardless of their location. This suggested that the lack of resources (attributed to out-of-Java ILGs) affected the development of indicators, but had no effect on the use of indicators. The same results were also found for accountability practices. The test revealed scores of 0.149 and 0.998, respectively (see Table 5.22). This indicated that ILGs seemed to discharge accountability at the same level regardless of the location.

### 5.6.3 By size

For all five independent variables (development, managerial use, higher use, internal, accountability, and external accountability), the results did not support public expectation that larger ILGs perform better than smaller ones as the scores were 0.611, 0.204, 0.546, 0.334, and 0.995, respectively (see Tables 5.21 and 5.22). Larger ILGs developed and used performance indicators to relatively the same extent as the smaller ones did. The levels of accountability practices were also similar.

This finding indicated that the extent of development and use of performance indicators as well as the levels of accountability within ILGs was indifferent, regardless of the size. This is not unusual given that in the Indonesian setting, larger revenue (financial resources) does not always correlate to higher resources (i.e. human resources, information technology, etc). Many ILGs have higher revenue due to the existence of natural resources (i.e. oil and gas mining). Consequently, according to Law No. 33/2004, the central government allocates a higher proportion of money to ILGs that have oil and gas in their jurisdictions. This explains why larger revenue size does not correlate to the ability to develop and use performance indicators.

**Table 5.21: Independent Sample t-Test Results-Performance Measurement**

Control Variables	Development		Managerial Use		Higher Use	
	Sig.	Mean	Sig.	Mean	Sig.	Mean
Type	0.022*	-0.38	0.067	-0.32	0.036*	-0.45
Location	0.007*	0.37	0.273	0.16	0.065	0.33
Size	0.611	-0.07	0.204	-0.19	0.546	-0.11

Legend: \*=Significant at 95% confidence level (< 0.05, 2-tailed)

**Table 5.22: Independent Sample t-Tests Results-Accountability**

Control Variables	Internal Accountability		External Accountability	
	Sig.	Mean	Sig.	Mean
Type	0.255	-0.22	0.508	-0.12
Location	0.149	0.23	0.998	0.00
Size	0.334	- 0.15	0.995	0.00

Legend: \*=Significant at 95% confidence level (< 0.05, 2-tailed)



## 5.7 Hypotheses Testing

This section presents the results and discussions from testing the relevant hypotheses. The first part describes how all independent variables were regressed to dependent variables without considering control variables. The second part addresses the integration of the three control variables of ILG—size, type, and location—in the regression analysis.

The model, along with the relevant hypotheses, was developed based on previous literature and it can be seen in Chapter 3, Figure 3.1. This model was used to investigate the relationships among the three factors and the outcomes of performance measurement initiatives (i.e. development and use of performance measures).

All hypotheses regarding the relationships among organisational and technical factors and the development and use of performance indicators were tested using multiple regression analysis. Although discussed in detail in Chapter 3, for simplicity this section repeats the hypotheses at the beginning of each sub-section. The use of OLS regression enabled an assessment of the direction and extent of the relationships among the dependent and independent variables. Chapter 4, Section 4.6.3 specifies the linear models underpinning the regression analysis in this section.

This section also considers if there are any differences between local government size and location on the development and use of performance measurement. Finally, the effects of possible differences between the two types of ILGs—*district* and *city*—on the development and use of performance measurement are examined.

### 5.7.1 Development of performance indicators

To reiterate, the hypotheses are:

H1a: The development of performance indicators is negatively associated with metric difficulties.

H2a: The development of performance indicators is positively associated with related technical knowledge.

H3a: The development of performance indicators is positively associated with management commitment.

H4a: The development of performance indicators is positively associated with legislative requirements.

All four hypotheses were tested using multiple regression analysis and the results are provided in Table 5.23.

**Table 5.23: Variables Affecting Development of Indicators**

Independent Variables	Ho (sign)	Development of Indicators	
		Coefficient	Sig.
Metric Difficulties	H1a (-)	-.168	.039**
Technical Knowledge	H2a (+)	.191	.054*
Management Commitment	H3a (+)	.322	.001**
Legislative Requirements	H4a (+)	.229	.020**
Adjusted $R^2$ = .421 $F$ -statistics = 18.471 Sample size = 96			

*Legend:* \* moderately significant, \*\* significant

Table 5.23 provides evidence of factors that affect the development of performance indicators in ILG. Due to missing responses for some of the variables, the sample size was 96 for this analysis. The resulting regression was significant, with an adjusted  $R^2$  of 42%. The results from the regression analysis firmly supported hypotheses H1a, H2a, H3a, and H4a of the study. Metric difficulties significantly deterred the extent of performance measures development (P-value < 0.05). Top management commitment and legislative requirements exhibited significant positive association with the development of performance measures (P-value < 0.05). There was a moderately significant positive association between technical knowledge and the development of performance measures (P-value < 0.1).

As evidenced from the results of the regression analysis in Table 5.23, management commitment had the strongest effect on the development of indicators with the highest regression coefficient (0.322) among other variables. This indicated that beside the measurement, knowledge, and regulation issues, the existence of strong

commitment from within ILG was the most important factor in the success of developing performance indicators.

### 5.7.2 Managerial use of performance indicators

The hypotheses considered here are:

H1b: Managerial use of performance indicators is negatively associated with metric difficulties

H2b: Managerial use of performance indicators is positively associated with related technical knowledge

H3b: Managerial use of performance indicators is positively associated with management commitment

H4b: Managerial use of performance indicators is not associated with legislative requirements

The results of the hypotheses testing are provided in Table 5.24.

**Table 5.24: Variables Affecting Managerial Use of Indicators**

Independent Variables	Ho (sign)	Managerial Use of Indicators	
		Coefficient	Sig.
Metric Difficulties	H1b (-)	-.090	.184
Technical Knowledge	H2b (+)	.168	.043*
Management Commitment	H3b (+)	.533	.000***
Legislative Requirements	H4b (+)	.182	.027**
Adjusted $R^2$ = .591 F-statistics = 35.649 Sample size = 96			

*Legend:* \* moderately significant, \*\* significant, \*\*\* highly significant

The resulting regression was mixed, with an adjusted  $R^2$  of 59.1%. This meant that metric difficulties, technical knowledge, management commitment, and legislative requirements were responsible for 59.1% of the factors that affected the managerial use of indicators. The rest, 40.9%, would be explained by other factors, which were not covered in the model tested. With regard to the association between actual managerial use of performance indicators and the implementation factors, management commitment had a highly positive association (P-Value < 0.001), and

legislative requirements and technical knowledge had positive associations (P-Value < 0.05). These results supported hypotheses *H2b*, *H3b*, and *H4b*.

Contrary to prediction, metric difficulties were not associated with the actual managerial use of performance measures. Therefore, hypotheses *H1b* was not supported by the analysis. This implied that despite the difficulties in developing indicators, ILGs formally made use of the indicators (i.e. in preparing annual performance reports) once they were available, regardless of the difficulties in understanding the meaning of the indicators. It seems contradictory but it is not uncommon in the ILG setting. As evidenced in the previous section, metric difficulties negatively affected the development of indicators.

In other words, at the managerial level, the local government officer did not acknowledge the difficulties in use of indicators as the use was based on the indicators already developed. In addition, in ILG the main use was only for formal reporting. Therefore, ILGs need to use the indicators as material to prepare and report LAKIP and to integrate them in budget documents as required by regulation. This finding supported the claim of previous researchers (Barreto & Baden-Fuller, 2006; Cavalluzzo & Ittner, 2004) that ILGs developed performance indicators for the sake of formality, making them more symbolic than having substance. This symbolic development of performance indicators, again, occurs most likely due to the mandatory requirement for ILGs to submit a LAKIP report to the central government. To get more insight in this matter, the interview explored this finding further.

Amongst the implementation factors examined, management commitment was the only variable that had a very strong association with the actual managerial use of indicators in Indonesian local government. This result supported de Lancer Julnes, and Holzer (2001) who concluded that internal stakeholders' (i.e. top executives and managers) participation had a positive effect on the use of indicators in organisations. Legislative requirements, the last implementation factor examined, appeared to have a moderate positive association with the development of indicators and showed moderate positive association with the use of indicators, as well.

In addition, the findings also supported the study by de Lancer Julnes, and Holzer (2001) who claimed that the development and use of performance indicators was heavily influenced by rational/technical factors (i.e. metric difficulties and technical knowledge) while the use of indicators was more heavily influenced by political/cultural factors (i.e. management commitment and legislative requirements).

### **5.7.3 Higher use of performance indicators**

The relevant hypotheses are:

H1c: Use of performance indicators is negatively associated with metric difficulties

H2c: Use of performance indicators is positively associated with related technical knowledge

H3c: Use of performance indicators is positively associated with management commitment

H4c: Use of performance indicators is not associated with legislative requirements

The results of the hypotheses testing are provided in Table 5.25. For higher use of indicators, the resulting regression was also mixed, with an adjusted  $R^2$  of 21.1%. This meant that metric difficulties, technical knowledge, management commitment, and legislative requirements were responsible for only 21.1% of the factors that affected the managerial use of indicators. The rest 78.9% would be explained by other factors, which were not covered in the model tested. The relatively low  $R^2$  could be explained by the new model discussed more in Chapter 8. There is actually another factor that is directly associated with higher use of indicators, which is the development of the indicator, while the four factors tested here have only indirect associations with higher use of indicators through the development of the indicator.

**Table 5.25: Variables Affecting Higher Use of Indicators**

Independent Variables	Ho (sign)	Higher Use of Indicators	
		Coefficient	Sig.
Metric Difficulties	H1c (-)	-.003	.977
Technical Knowledge	H2c (+)	.096	.402
Management Commitment	H3c (+)	.363	.002**
Legislative Requirements	H4c (+)	.114	.316
Adjusted R <sup>2</sup> = .211 F-statistics = 7.406 Sample size = 96			

*Legend:* \* moderately significant, \*\* significant, \*\*\* highly significant

Unlike managerial use discussed in the previous sub-section, higher use of indicators showed only one significant factor: management commitment (P-Value < 0.05). The other factors showed no significant results. This indicated that at the higher level ILG officers used performance indicators regardless of the difficulties associated with developing them. These difficulties included a lack of knowledge and the perceived pressure of complying with legislation.

Amongst the implementation factors examined, management commitment was the only variable that had a strong association with the actual higher use of indicators in Indonesian local government. This result supported de Lancer Julnes and Holzer (2001) who concluded that internal stakeholders' (i.e. top executive and manager) participation had a positive effect on the use of indicators in organisations.

#### **5.7.4 Internal accountability**

For this variable the hypotheses tested are:

H3d: Internal accountability is positively associated with management commitment

H4d: Internal accountability is positively associated with legislative requirements

H5d: Internal accountability is positively associated with organisational capacity

The results of hypotheses testing are provided in Table 5.26.

**Table 5.26: Variables Affecting Internal Accountability**

Independent Variables	Ho (sign)	Internal Accountability	
		Coefficient	Sig.
Management Commitment	H3d (+)	0.428	.000***
Legislative Requirements	H4d (+)	0.273	.004**
Organisational Capacity	H5d (+)	0.030	.727
Adjusted $R^2 = .368$ $F$ -statistics = 19.837 Sample size = 97			

*Legend:* \* moderately significant, \*\* significant, \*\*\* highly significant

For internal accountability, the resulting regression was also mixed, with an adjusted  $R^2$  of 36.8%. This meant that management commitment, legislative requirements, and organisational capacity were responsible for only 36.8% of the factors that affected internal accountability. The other 63.2% could be explained by possible other variables not in the model. The strongest variable was management commitment, followed by legislative requirements. Organisational capacity seemed not to have had an effect on internal accountability. This result was consistent with the result of the independent t-test, presented in the previous section. Despite differences in organisational capacity, the extent of internal accountability practices were indifferent between large and small ILG.

Similar to discussion provided in Sub-section 5.7.1, the relatively low  $R^2$  could be better explained by the new model (refer to Chapter 8, Section 8.7). In this case, the three factors tested here were not the only factors actually influencing internal accountability. There are other factors such as the development of the indicator and higher use of the indicator.

### **5.7.5 External accountability**

Here the relevant hypotheses are:

H3e: External accountability is positively associated with management commitment

H4e: External accountability is positively associated with legislative requirements

H5e: External accountability is positively associated with organisational capacity

The results of hypotheses testing are provided in Table 5.27.

**Table 5.27: Variables Affecting External Accountability**

Independent Variables	Ho (sign)	External Accountability	
		Coefficient	Sig.
Management Commitment	H3e (+)	0.376	.000***
Legislative Requirements	H4e (+)	0.252	.004**
Organisational Capacity	H5e (+)	0.307	.000***
Adjusted $R^2$ = .482 $F$ -statistics = 31.041 Sample size = 97			

*Legend:* \* moderately significant, \*\* significant, \*\*\* highly significant

Unlike internal accountability, the results of the regression for external accountability were homogenous, with an adjusted  $R^2$  of 48.2%. Management commitment and organisational capacity were the strongest followed by legislative requirements. This result was in contrast to the result of the independent t-test presented in the previous section. Large ILGs (attributed to high capacity) did practice more external accountability than did small ILGs (attributed to low capacity). This inconsistency was explored further in the interviews. Table 5.28 presents a summary of regression results.

**Table 5.28: Summary of Regression Results**

Variables	Dev	MUse	HUse	IAcc	EAcc
Metric Difficulties	--	0	0		
Technical Knowledge	+	++	0		
Management Commitment	++	+++	++	+++	+++
Legislative Requirements	++	++	0	++	++
Organisational Capacity				0	+++

*Legend:*

blank = not hypothesised within the model, 0 = no association, -- = significant negative association, + = moderate association, ++ = significant positive association, +++ = highly significant positive association



## 5.8 Summary

This chapter tested whether the independent variables influenced the development of indicators, the use of result-oriented performance indicators, and accountability of performance in ILG. The regression analysis results indicated that the model for explaining the extent of performance measures development and use provided strong support for the hypotheses. Three out of four independent variables had a significant positive association with the development of indicators. One variable, metric difficulty had a significant negative association with the development of indicators. With regard to the actual use of measures, three out of four variables tested had a significant positive association. The metric difficulties variable was the only variable that had no significant association with the actual use of indicators. All independent variables tested (management commitment, legislative requirements, organisational capacity, and use of indicators) showed significant positive associations with respect to external accountability.

An independent sample t-test on the control variables provided mixed results. This test revealed that there was a significant difference between two types of ILG in development and higher use of indicators. Cities tended to develop and use indicators more frequently than districts did. Similarly, in-Java ILGs tended to develop more indicators, but there was no difference in the level of use between in-Java and out-of-Java ILGs. In contrast, size did not have any effect on performance measurement and accountability in ILG. Both large and small ILGs tended to develop indicators and use them at the same level. Similar results were found for accountability practices.

Finally, descriptive statistics analysis determined that the most highly developed indicators were output indicators, despite the implementation of performance-based budgeting. Conversely, the use of indicators was mainly for setting strategies and determining program priorities, allocating resources, and coordinating programs within the organisation. Chapter 6 extends this analysis and presents the results using PLS.

## **Chapter 6: Quantitative Analysis Part 2**

### **6.1 Introduction**

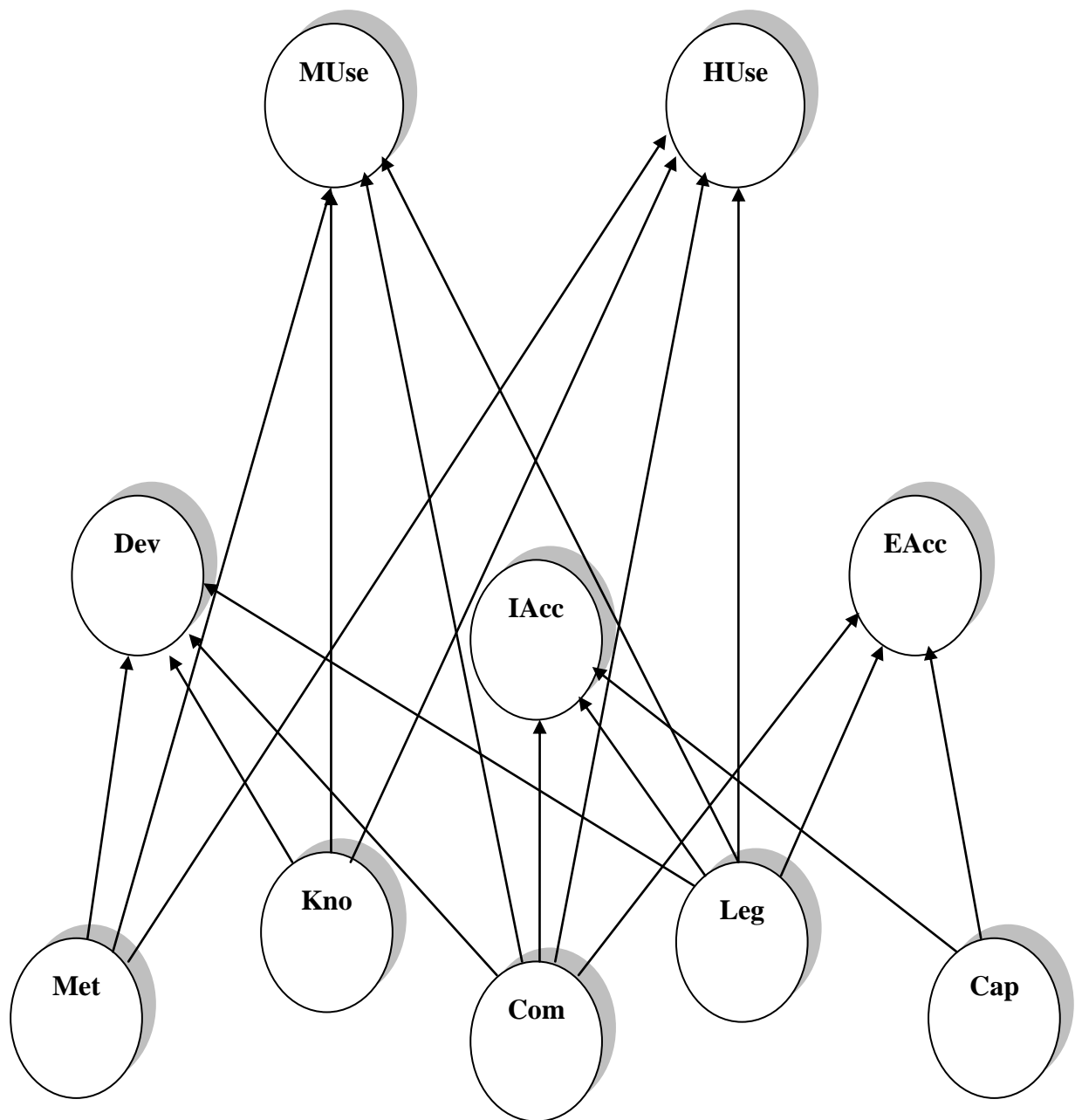
Following on from Chapter 5, a further analysis using second-generation multivariate analysis—PLS regression—was undertaken in order to gain more rigorous statistical results (Barclay, et al., 1995). Due to its ease of use, SmartPLS Rel 2.0 M3 software was used to conduct the analysis. The chapter begins with selection of the estimation method (Section 6.2) followed by measurement model assessment (Section 6.3), structural model assessment (Section 6.4), hypotheses testing (Section 6.5), OLS and PLS compared (Section 6.6), sensitivity analysis (Section 6.7), and a comparison of initial model and new model PLS results (Section 6.8).

### **6.2 Selection of Estimation Method**

#### **6.2.1 Estimation method**

Data were analysed using SEM. There are two types of SEM techniques: covariance-based techniques and variance-based techniques. PLS is the most prominent representative for the latter (Henseler, et al., 2009). PLS is a second-generation multivariate data analysis technique that allows the simultaneous assessment of reliability and validity whilst also estimating the relationships among constructs (Barclay, et al., 1995). This analysis is a latent variable modelling technique that incorporates multiple dependent constructs and explicitly recognises measurement error (Fornell, 1982). PLS has been used in a number of accounting studies (S.W. Anderson, et al., 2002; Chenhall, 2004, 2005; Ittner, et al., 1997; Vandenbosch, 1999), and is particularly suited to this study because it makes minimal data assumptions and requires relatively small sample sizes (Wold, 1985). SmartPLS Rel 2.0 M3 software was utilised in conducting the analysis.

Considering the nature of the study and the existence of multiple path relationships among variables within the model, it was decided that PLS was the most appropriate statistical tool to conduct further analysis. The relationships among variables in the initial model are depicted in Figure 6.1.



**Figure 6.1: Initial Structural Model**

*Legend:*

Com = management commitment, Met = metric difficulties, Kno = technical knowledge, Leg = legislative requirements, Dev = development of indicator, MUse = managerial use of indicator, HUse = higher use of indicator, IAcc = internal accountability, EAcc = external accountability, Cap = organisational capacity

### 6.2.2 Sample size

Sample size is an important issue in the SEM approach, as it will affect the results of the analysis. Gefen et al. (2005) argued that the sample size should be no lower than 10 times the number of items within the most complex construct of the model tested. Given the rule, the sample size for this study would have needed to be a minimum 80 cases ( $n=8$  items related to managerial use of indicator and external accountability  $\times$  10). There were 98 valid cases in this study, which exceeded the minimum number required; thus, the data set satisfied the requirement for a sound PLS analysis.

### 6.2.3 Data examination

Before proceeding to further data analysis, it was considered a sound practice to eliminate any outliers that might produce misleading results (Alrect & Settle, 1995). As such, the data set was scanned on a line-by-line basis to find possible errors such as missing data or disordered records. No errors were found and the data set was ready for further PLS procedures. Unlike OLS regression, PLS regression analysis does not require the data to be normally distributed (Chin, et al., 2003). Consequently, tests for normality such as skewness, kurtosis, and Kolmogorov-Smirnov were not necessary.

**Table 6.1: Summary of Variables in the Model**

No	Latent Variables	Short Code	Variables Types	Manifest Variables	Number of Items
1	Development of Indicator	Dev	exogenous	Dev_1–Dev_7	7
2	Managerial Use of Indicator	MUse	exogenous	MUse_1–MUse_8	8
3	Higher Use of Indicator	HUse	exogenous	HUse_1–HUse_3	3
4	Internal Accountability	IAcc	exogenous	IAcc_1–IAcc_4	4
5	External Accountability	EAcc	exogenous	EAcc_1–EAcc_8	8
6	Metric Difficulties	Met	endogenous	Met_1–Met_5	5
7	Technical Knowledge	Kno	endogenous	Kno_1–Kno_5	5
8	Management Commitment	Com	endogenous	Com_1–Com_3	3
9	Legislative Requirements	Leg	endogenous	Leg_1–Leg_2	2
10	Organisational Capacity	Cap	endogenous	Cap_1–Cap_4	4
Total					49

Forty-nine items within ten latent variables (variables) were used in the model (as shown in Table 6.1). Five exogenous variables (dependent variables)—development

of indicator, managerial use of indicator, higher use of indicator, internal accountability, and external accountability—and five endogenous variables (independent variables) —metric difficulties, technical knowledge, management commitment, legislative requirements, and organisational capacity—were employed in the model. It should be noted that a minimum of two indicators for each variable were used in the questionnaire (Kline, Schwartz, Allen, & Dikman, 1998). The number of indicators within the model ranged from two to eight, with only one variable (legislative requirements) having only two indicators.

### **6.3 Measurement Model Assessment—Initial Model**

#### **6.3.1 Item reliability**

The measurement model of PLS analysis consists of two phases: convergent validity followed by discriminant validity. The first phase is to assess the model's convergent validity using two measures: individual item reliability and internal consistency (Santosa, et al., 2005). Individual item reliability measures the convergence of each indicator variable on its associated construct. Item reliability is assessed by examining the loading (i.e. correlations) of the indicator with its respective construct. Convergence, then, is assessed by comparing the loadings with a certain benchmark. Table 6.2 displays the single item reliability. As indicated in the table, all indicators had a loading value above the minimum requirement (0.4) suggested by Igbaria et al. (1997) and Hair et al. (2006), thus meeting the guideline.

**Table 6.2: Item Reliability-Initial Model**

Construct	Item	Loading
Development of Indicator (Dev)	Dev_1	0.661
	Dev_2	0.747
	Dev_3	0.812
	Dev_4	0.742
	Dev_5	0.809
	Dev_6	0.748
	Dev_7	0.775
Managerial Use of Indicator (MUse)	MUse_1	0.734
	MUse_2	0.783
	MUse_3	0.813
	MUse_4	0.832
	MUse_5	0.832
	MUse_6	0.780
	MUse_7	0.754
	MUse_8	0.707
Higher Use of Indicator (HUse)	HUse_1	0.776
	HUse_2	0.933
	HUse_3	0.926
Internal Accountability (IAcc)	IAcc_1	0.463
	IAcc_2	0.894
	IAcc_3	0.890
	IAcc_4	0.833
External Accountability (EAcc)	EAcc_1	0.828
	EAcc_2	0.835
	EAcc_3	0.879
	EAcc_4	0.857
	EAcc_5	0.843
	EAcc_6	0.805
	EAcc_7	0.888
	EAcc_8	0.877
Metric Difficulties (Met)	Met_1	0.831
	Met_2	0.837
	Met_3	0.894
	Met_4	0.839
	Met_5	0.827
Technical Knowledge (Kno)	Kno_1	0.773
	Kno_2	0.864
	Kno_3	0.755
	Kno_4	0.778
	Kno_5	0.521
Management Commitment (Com)	Com_1	0.893
	Com_2	0.940
	Com_3	0.887
Legislative Requirement (Leg)	Leg_1	0.924
	Leg_2	0.931
Organisational Capacity (Cap)	Cap_1	0.855
	Cap_2	0.803
	Cap_3	0.681
	Cap_4	0.619

### 6.3.2 Internal consistency

The second reliability testing of PLS analysis is measuring the internal consistency of the constructs. Internal consistency is a measure of reliability that indicates whether several different measurement items all measure the same construct. This study utilised the composite reliability used by Fornell and Larcker (1981) in determining internal consistency. This measure is considered superior to the traditional measure of consistency (Cronbach's alpha) because it does not depend on the number of indicators. Adequate reliability is gained when the composite reliability value is greater than 0.5. As shown in Table 6.3, all the constructs exhibited adequate reliability.

**Table 6.3: Internal Consistency and AVE-Initial Model**

Construct	Composite Reliability	Cronbach's Alpha*	AVE
Development of Indicator	0.904	0.876	0.574
Managerial Use of Indicator	0.926	0.908	0.609
Higher Use of Indicator	0.912	0.858	0.777
Internal Accountability	0.863	0.791	0.625
External Accountability	0.955	0.946	0.726
Metric Difficulties	0.926	0.901	0.716
Technical Knowledge	0.860	0.793	0.558
Management Commitment	0.933	0.892	0.823
Legislative Requirements	0.925	0.838	0.861
Organisational Capacity	0.904	0.876	0.574

*Legend:* \*presented only for comparative purposes

Fornell and Larcker (1981) suggested that convergent validity can also be assessed by using a more conservative test known as the AVE method. It measures the amount of variance captured by the construct in relation to the amount of variance attributable to measurement error. AVE should equal or exceed 0.5 to be adequate. The final column of Table 6.3 shows that the AVE was also satisfactory for all constructs.

### 6.3.3 Discriminant validity

Discriminant validity refers to the extent to which a nominated construct is different or distinct from other constructs in the model (Barclay et al., 1995). Within

SmartPLS, two methods are commonly used to assess the level of discriminant validity: (1) correlation of constructs and (2) cross loading of constructs. Regarding indicator level validity, Barclay et al. (1995) suggest that no indicator variable should load more highly on another construct than it does on the construct it is supposed to measure. Appendix A.6-1 provides a summary of the cross-loading results for each individual item across each of the constructs in the model. Analysis of the results showed that no individual item (in bold) loaded higher on another than that of the construct it was supposed to measure. Based on the results obtained from the cross-loading constructs analysis, the study claims that the model items demonstrated an adequate level of discriminant validity. At construct level, discriminant validity is adequate when the variance shared between a construct and any other construct in the model is less than the variance that construct shares with its indicators (Fornell, 1982). Table 6.4 presents the correlation matrix of the construct and the square root of AVE (in bold).

**Table 6.4: Correlation of Constructs and the Square Root of AVE-Initial Model**

	Cap	Com	Dev	EAcc	HUse	IAcc	Kno	Leg	MUse	Met
Cap	<b>0.758</b>									
Com	0.390	<b>0.907</b>								
Dev	0.238	0.581	<b>0.758</b>							
EAcc	0.491	0.614	0.483	<b>0.852</b>						
HUse	0.224	0.490	0.501	0.424	<b>0.881</b>					
IAcc	0.275	0.620	0.442	0.642	0.644	<b>0.790</b>				
Kno	0.339	0.516	0.513	0.528	0.361	0.466	<b>0.747</b>			
Leg	0.189	0.505	0.510	0.491	0.361	0.507	0.515	<b>0.928</b>		
MUse	0.179	0.732	0.652	0.545	0.608	0.552	0.556	0.546	<b>0.781</b>	
Met	0.073	-0.231	-0.280	-0.069	-0.109	-0.114	-0.172	-0.043	-0.252	<b>0.846</b>

Previous literature suggested that these tests are best tabulated as in Table 6.4, because the off-diagonal items (correlation of constructs) must be less than or equal to the bolded diagonal items (square root of the AVE) in the corresponding rows and columns (Igbaria, et al., 1997; Barclay et al., 1995; Gefen et al., 2005). Table 6.4 shows that diagonal values were greater than the off-diagonal values in their corresponding rows and columns; therefore, there should be no issues with the discriminant validity of the constructs.



## 6.4 Structural Model Assessment—Initial Model

The structural model, also known as the inner model, focuses on the hypothesised relationships or paths between the latent variables (Hair et al., 2006). A structural model can be used to draw conclusions about the significance of the relationships among constructs and to comment on the predictive power of the theoretical model proposed (Goles, 2001). Assessment of the model was divided into two key areas. The first area assessed the predictive capabilities of the model; the second examined the strengths of the relationships among the model variables. The method used to assess the predictive power of the model was to calculate the  $R^2$  value or the amount of the variance in the construct explained by the model. Interpretation of the  $R^2$  value obtained from the SmartPLS software is similar to the  $R^2$  value obtained from a multiple regression analysis (Barclay et al., 1995). The higher the value of  $R^2$  or the explained variation, the greater the explanatory power of the model and the better the fit with the data.

As shown in Table 6.5 below, the  $R^2$  values of the exogenous variables (i.e. dependent variables) ranged from 0.265 to 0.607. The strongest  $R^2$  value was that of managerial use of indicators (0.607), which suggested that 60.7% of use of indicators for managerial level purposes could be explained by the construct used in the model. The second strongest was for external accountability (0.497), while the lowest was that of higher use of indicators (0.265). All  $R^2$  values met the 0.10 minimum limit suggested by Santosa, Wei, and Chan (2005) and Hanlon (2001).

**Table 6.5:  $R^2$  Values-Initial Model**

Construct	$R^2$ *
Development of Indicator (Dev)	0.455
Managerial Use of Indicator (MUse)	0.607
Higher Use of Indicator (HUse)	0.265
Internal Accountability (IAcc)	0.437
External Accountability (EAcc)	0.497

*Legend:*

\* 0.67 = substantial, 0.33 = moderate, and 0.19 = weak (Henseler et al., 2009)

## 6.5 Hypotheses Testing—Initial Model

To test the hypotheses, it was necessary to interpret the construct equations with standard errors and test statistics. The construct equations measure the extent to which one factor relates to another; that is, they measure the structural path coefficients and t-values between hypothesised constructs, reflecting direct relationships (Tabachnick & Fidell, 1996). These path coefficients and associated t-values identify and demonstrate the direction and strength of each relationship, and as indicated throughout this chapter, they are obtained by using a bootstrapping technique in SmartPLS software. "The t-values (robust scores) need to be significant to support the hypothesised paths and should be above 1.64 or 2.33 for alpha protection level of 0.05 and 0.01, respectively" (Gefen, Straub and Boudreau, 2005, pp.34-35; Byrne 1994, p.60). The results for the structural relationships are reported in Table 6.6 as the path coefficient and t-value outputs from the bootstrap analysis. The table indicates that five path relationships are not significant; however, 13 other paths show a significant level of relationship.

**Table 6.6: Bootstrapping Results—Initial Model**

Hypotheses	Path (Sign)	Coeff.	T-Value	Significance
H1a	Met -> Dev (-)	-0.162	1.956**	P < 0.05
H2a	Kno -> Dev (+)	0.195	2.224**	P < 0.05
H3a	Com -> Dev (+)	0.322	2.534***	P < 0.01
H4a	Leg -> Dev (+)	0.240	2.735***	P < 0.01
H1b	Met -> MUse (-)	-0.092	1.500	NS
H2b	Kno -> MUse (+)	0.171	2.077**	P < 0.05
H3b	Com -> MUse (+)	0.529	7.243***	P < 0.01
H4b	Leg -> MUse (+)	0.187	2.346***	P < 0.01
H1c	Met -> HUse (-)	0.002	0.020	NS
H2c	Kno -> HUse (+)	0.108	0.854	NS
H3c	Com -> HUse (+)	0.377	3.498***	P < 0.01
H4c	Leg -> HUse (+)	0.115	0.987	NS
H3d	Com -> IAcc (+)	0.472	3.621***	P < 0.01
H4d	Leg -> IAcc (+)	0.261	2.298**	P < 0.05
H5d	Cap -> IAcc (+)	0.042	0.346	NS
H3e	Com -> EAcc (+)	0.374	3.449***	P < 0.01
H4e	Leg -> EAcc (+)	0.245	2.618***	P < 0.01
H5e	Cap -> EAcc (+)	0.299	2.398***	P < 0.01

*Legend:*

NS=not significant, \*\*\*=highly significant, \*\*=significant

### **Hypothesis H1a**

The results provided support for hypothesis H1a: "*Development of performance indicators is negatively associated with metric difficulties*". The score 1.956 was well above the cut-off point of 1.64 ( $P < 0.05$ ). Similar to the significant results obtained from OLS, the result from PLS was also considered significant. Hence, this suggested that problems related to metric difficulties in performance measurement did hinder the development of performance indicators in ILG.

### **Hypothesis H2a**

The results provided strong support for hypothesis H2a: "*Development of performance indicators is positively associated with related technical knowledge*". The score 2.224 was well above the cut-off point of 1.64 ( $P < 0.05$ ) and stronger than the result obtained from the OLS (marginally significant). This result implied that the development of indicators in ILG increased as their officers and staff gained more related technical knowledge.

### **Hypothesis H3a**

The results provided very strong support for hypothesis H3a: "*Development of performance indicators is positively associated with management commitment*". The score 2.534 was well above the cut-off point of 2.33 ( $P < 0.01$ ). Similar to the results obtained from OLS, which were significant, the outcome from PLS was also considered significant. This suggested that management commitment from ILG officials was very important to the development of performance indicators.

### **Hypothesis H4a**

The results provided very strong support for hypothesis H4a: "*Development of performance indicators is positively associated with legislative requirements*". The score 2.735 was well above the cut-off point of 2.33 ( $P < 0.01$ ), confirming the result obtained from the OLS with even stronger support. This implied that the development of indicators in ILG increased as legislation regarding performance reporting intensified. In other words, as new regulations related to performance

reporting emerged, ILGs responded promptly by providing more indicators as required by those regulations.

### **Hypothesis H1b**

The results provided no support for hypothesis H1b: "*Managerial use of indicators is negatively associated with metric difficulties*". The score was only 1.500, which was less than 1.64 ( $P < 0.05$ ). H1b was not significant; therefore, the hypothesis was not supported. This result confirmed the finding obtained from the OLS analysis. This indicated that using performance indicators at the managerial level had nothing to do with the problems that existed in the process of developing performance indicators. Once indicators became available, ILG officers at the manager level just used them without the need to consider the problems that existed when they were developed.

### **Hypothesis H1c**

As in H1b, the results provided no support for hypothesis H1c: "*Higher use of indicators is negatively associated with metric difficulties*". The score was only 0.020, which was far below the cut-off point of 1.64 ( $P < 0.05$ ). Therefore, this hypothesis was definitely not supported. This result, again, confirmed the result obtained from the OLS analysis. It suggested that just like in the managerial level, for higher level ILG officers, the use of performance indicators was not affected by the difficulties in developing the indicators. Higher level ILG officers simply used the indicators that became available for them. This result was logical and not surprising given that mid-level ILG managers are normally the people responsible for the task of developing performance indicators.

### **Hypothesis H2b**

The results provided strong support for hypothesis H2b: "*Managerial use of indicators is positively associated with related technical knowledge*". The score 2.077 was higher than the cut-off point of 1.64 ( $P < 0.05$ ). This was in line with the result obtained from the OLS analysis. This implied that the extent of use of performance indicators by managerial level officers was affected by the level of their

technical knowledge. As the knowledge they had increased, the more they made use of performance indicators.

### **Hypothesis H2c**

The results provided no support for hypothesis H2c: "*Higher use of indicators is positively associated with related technical knowledge*". The score 0.854 was below the cut-off point of 1.64 ( $P < 0.05$ ), confirming the result obtained from the OLS analysis. This indicated that technical knowledge was not a determinant in the use of performance indicators by higher level ILG officials. In other words, the extent of use of performance indicators at a higher level remained unchanged despite their officers and staff gaining more related technical knowledge.

### **Hypothesis H3b**

The results provided very strong support for hypothesis H3b: "*Managerial use of indicators is positively associated with management commitment*". The score 7.243 was well above the cut-off point of 2.33 ( $P < 0.01$ ). This result firmly confirmed the result obtained from the OLS analysis. This implied that the use of indicators in ILG at the managerial level was highly influenced by the commitment of ILG officers. The higher the level of management commitment, the higher was the extent of use of performance indicators.

### **Hypothesis H3c**

The results provided strong support for hypothesis H3c: "*Higher use of indicators is positively associated with management commitment*". The score 3.498 was well above the cut-off point of 2.33 ( $P < 0.01$ ) and confirmed the result obtained from the OLS analysis. This result implied that the use of indicators at a higher level was influenced by the commitment of ILG officers. Similar to the finding at the managerial level, the extent of use at the higher level increased as commitment increased.

### **Hypothesis H4b**

The results provided strong support for hypothesis H4b: "*Managerial use of indicators is positively associated with legislative requirements*". The score 2.346 was higher than the cut-off point of 1.64 ( $P < 0.05$ ). This was in line with the result obtained from the OLS analysis. This result implied that the use of indicators at the managerial level was affected by regulatory requirements received by ILG. It seemed that regulations related to performance reporting (mainly imposed by the central government) did have an impact on the level of use of indicators at the managerial level. This finding might have indicated the existence of *coercive isomorphism*; therefore, it was explored further in the interview phase.

### **Hypothesis H4c**

The results provided no support for hypothesis H4c: "*Higher use of indicators is positively associated with legislative requirements*". With the score of only 0.987, this was well below the cut-off point of 1.64 ( $P < 0.05$ ) and confirmed the result obtained from the OLS analysis. This result implied that, unlike at the managerial level, the use of indicators in ILG at the higher level was unaffected by regulatory requirements received by ILG. It seemed that regulations related to performance reporting (mainly imposed by the central government) had no impact on the level of use of indicators at the higher level. This was inconsistent with the finding in H4b. ILG officials at a higher level responded differently to the regulatory requirements than did those at the managerial level. This was further explored in the interview phases and the topic is discussed in detail in Chapter 8.

### **Hypothesis H3d**

The results provided very strong support for hypothesis H3d: "*Internal accountability is positively associated with management commitment*". The score 3.621 was well above the cut-off point of 2.33 ( $P < 0.01$ ), which strongly confirmed the result obtained from the OLS analysis. This result implied that the extent of accountability inside ILG was higher when ILG officers were more committed to implementing PMS.

### **Hypothesis H3e**

Similar to the H3d findings, the results provided very strong support for hypothesis H3e: "*External accountability is positively associated with management commitment*". The score 3.449 was well above the cut-off point of 2.33 ( $P < 0.01$ ). Consistent with the result obtained from the OLS analysis, the result from PLS analysis indicated that there was a positive association between external accountability and management commitment. This implied that the extent of external accountability provided by ILG to their stakeholders was affected by the officers' commitment to implementing PMS. It seemed that high commitment was effective in enhancing both internal and external accountability in ILG.

### **Hypothesis H4d**

The results provided strong support for hypothesis H4d: "*Internal accountability is positively associated with legislative requirements*". The score 2.298 was well above the cut-off point of 1.64 ( $P < 0.05$ ), confirming the result obtained from the OLS analysis. This result implied that legislative requirements (imposed by the central government) did have an impact on the level of accountability inside ILG.

### **Hypothesis H4e**

The result provided very strong support for hypothesis H4e: "*External accountability is positively associated with legislative requirements*". The score 2.618 was higher than the cut-off point of 2.33 ( $P < 0.01$ ) and in line with the result obtained from the OLS analysis. This result indicated that legislative requirements had a strong impact on the level of external accountability in ILG. It suggested that the mandatory nature of performance reporting regulations did assure improvement in the external accountability of ILG.

### **Hypothesis H5d**

The results provided no support for hypothesis H5a: "*Internal accountability is positively associated with organisational capacity*". The score 0.346 was far below the cut-off point of 1.64 ( $P < 0.05$ ), confirming the result obtained from the OLS

analysis that organisational capacity (i.e. management information systems and staff capability) had no association with the extent of internal accountability practiced in ILG.

### **Hypothesis H5e**

Contrary to the finding in H5d, the results provided strong support for the hypothesis H5e: "*External accountability is positively associated with organisational capacity*". The score 2.398 was higher than the cut-off point of 2.33 ( $P < 0.05$ ), which confirmed the result obtained from the OLS analysis that organisational capacity (i.e. management information systems and staff capability) had an impact on the level of external accountability. The higher the capacity of ILG was (in terms of management information systems, human resources capability), the higher was the level of external accountability. Interviews were used to gather more comments and explanations on the inconsistent results between H5d and H5e.

## **6.6 Ordinary Least Squares and Partial Least Squares Compared**

As indicated in Table 6.7 below, in six hypotheses tests (H2a, H3a, H4a, H4b, H3c, and H4e), the PLS showed stronger results than the OLS analysis. The results for the remaining hypotheses were very similar and no major variations were found.



**Table 6.7: Comparison of Hypothesis Testing**

No.	Hypothesis	Path	OLS	PLS
1	H1a	Met -> Dev	++	++
2	H2a	Kno -> Dev	+	++
3	H3a	Com -> Dev	++	+++
4	H4a	Leg -> Dev	++	+++
5	H1b	Met -> MUse	0	0
6	H2b	Kno -> MUse	++	++
7	H3b	Com -> MUse	+++	+++
8	H4b	Leg -> MUse	++	+++
9	H1c	Met -> HUse	0	0
10	H2c	Kno -> HUse	0	0
11	H3c	Com -> HUse	++	+++
12	H4c	Leg -> HUse	0	0
13	H3d	Com -> IAcc	+++	+++
14	H4d	Leg -> IAcc	++	++
15	H5d	Cap -> IAcc	0	0
16	H3e	Com -> EAcc	+++	+++
17	H4e	Leg -> EAcc	++	+++
18	H5e	Cap -> EAcc	+++	+++

*Legend:*

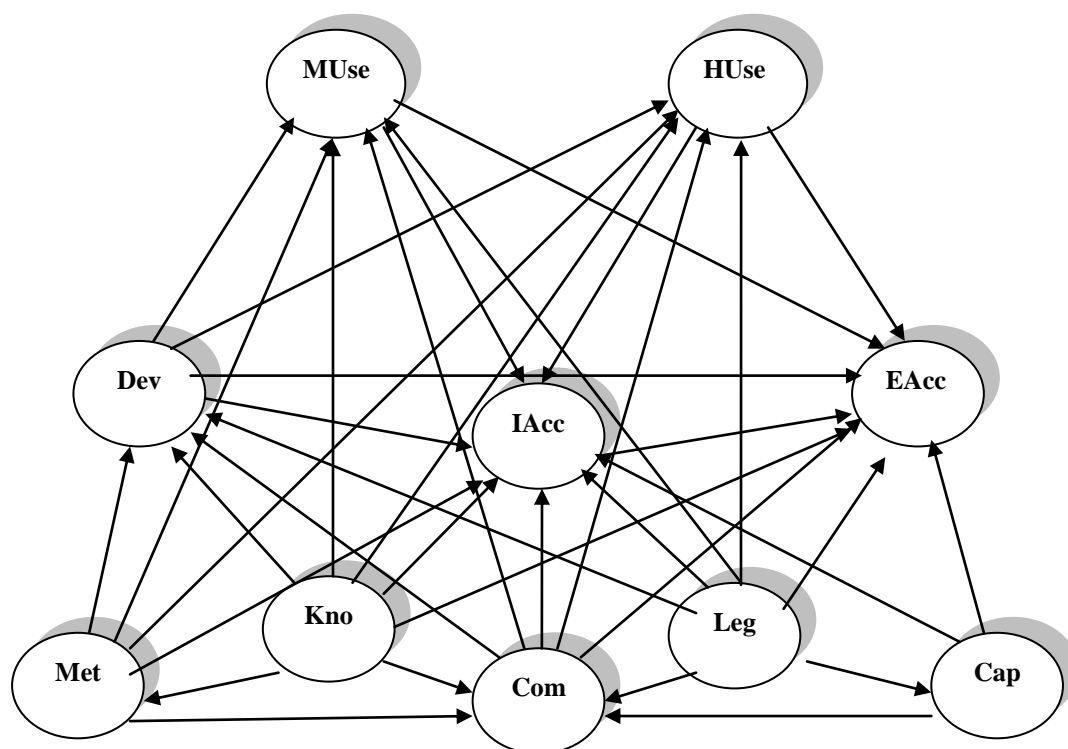
+++ = highly significant, ++ = significant, + = marginally significant, 0 = not significant

There appeared to be an indication that hypotheses testing using PLS showed stronger results than those obtained from using OLS. This finding provided support for the utilisation of PLS as a second-generation regression for further analysis, supplementing or even replacing OLS regression.

## 6.7 Sensitivity Analysis

The previous section provided the results of PLS analysis for the initial model, the same model analysed using OLS with results presented in Chapter 5. Considering the findings in the previous section and the explorative nature of this study in Indonesia, it is argued here that there was a possibility of new relationships among the constructs. In this situation, PLS was the appropriate analytical tool to explore the data further and to uncover new relationships amongst variables not hypothesised in the initial model. Based on these considerations, a possible alternative model was proposed. The results of PLS analysis for this alternative model are provided in detail below.

Figure 6.2 presents the new model to be tested. The same logics and procedures to test item reliability, internal consistency, and discriminant validity were applied to the new model (see Appendix A.6-4 for details).



**Figure 6.2: New Structural Model**

*Legend:*

Com = management commitment, Met = metric difficulties, Kno = technical knowledge, Leg = legislative requirements, Dev = development of indicator, MUse = managerial use of indicator, HUse = higher use of indicator, IAcc = internal accountability, EAcc = external accountability, Cap = organisational capacity

Given that all the criteria had been fulfilled for assessing the measurement model of the new model (see Appendix A.6-4), the assessment could proceed to the next step—the assessment of the new structural model. Table 6.8 shows the  $R^2$  values within the new model.

**Table 6.8: R<sup>2</sup> Values—New Model**

Construct	R <sup>2</sup> *
Development of Indicator (Dev)	0.455
Managerial Use of Indicator (MUse)	0.607
Higher Use of Indicator (HUse)	0.265
Internal Accountability (IAcc)	0.437
External Accountability (EAcc)	0.497
Management Commitment (Com)	0.435
Organisational Capacity (Cap)	0.039
Metric Difficulties (Met)	0.030

*Legend:*

\* 0.67 = substantial, 0.33 = moderate, and 0.19 = weak

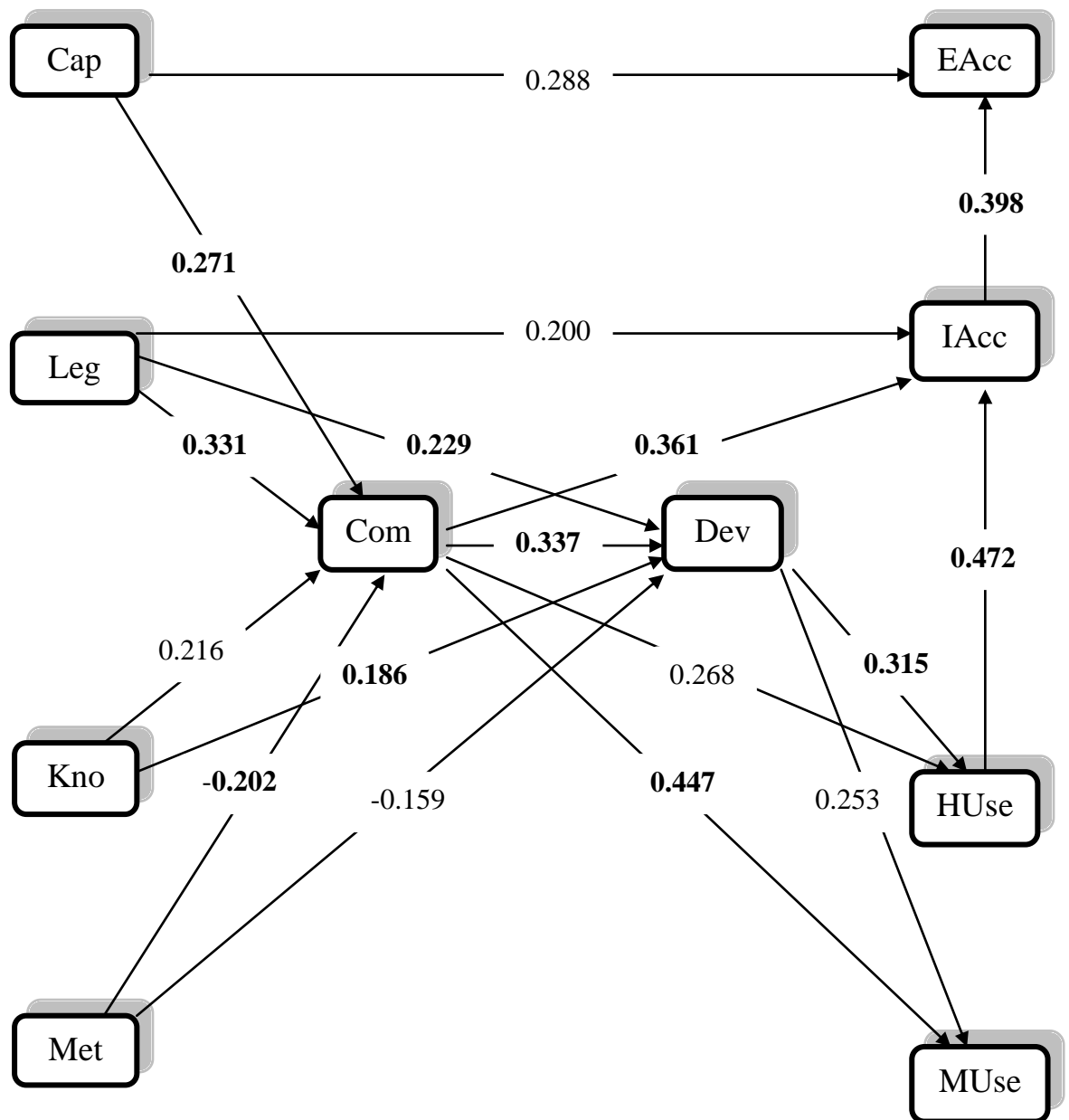
As shown in Table 6.8, the R<sup>2</sup> values of the exogenous variables (dependent variables) ranged from 0.265 to 0.607. The strongest R<sup>2</sup> value was that of managerial use of indicators (0.607), which indicated that 60.7% of the use of indicators for managerial level purposes could be explained by the constructs used in the model. The second strongest was for external accountability (0.497), while the lowest was that of higher use of indicators (0.265). Two R<sup>2</sup> values (organisational capacity and metric difficulties) did not meet the 0.10 minimum requirements. This occurred because, within the model, these new exogenous variables both had only one antecedent variable. Table 6.9 shows that the path coefficients of the model ranged from the weakest of only 0.000 (for Met -> IAcc) to the strongest of 0.472 (for HUse -> IAcc). Table 6.9 shows that 17 paths out of 36 relationships tested using SmartPLS were significant.

**Table 6.9: Bootstrapping Results—New Model**

Hypotheses	Path	Coefficient	t-value	Significance
H1a	Met -> Dev	-0.159	1.859**	P < 0.05
H2a	Kno -> Dev	0.186	2.363***	P < 0.01
H3a	Com -> Dev	0.337	3.108***	P < 0.01
H4a	Leg -> Dev	0.229	2.801***	P < 0.01
H1b	Met -> MUse	-0.049	0.785	NS
H2b	Kno -> MUse	0.120	1.424	NS
H3b	Com -> MUse	0.447	4.014***	P < 0.01
H4b	Leg -> MUse	0.127	1.446	NS
H1c	Met -> HUse	0.053	0.493	NS
H2c	Kno -> HUse	0.050	0.422	NS
H3c	Com -> HUse	0.268	2.277**	P < 0.05
H4c	Leg -> HUse	0.043	0.381	NS
H3d	Com -> IAcc	0.361	2.859***	P < 0.01
H4d	Leg -> IAcc	0.200	1.747**	P < 0.05
H5d	Cap -> IAcc	-0.008	0.086	NS
H3e	Com -> EAcc	0.071	0.500	NS
H4e	Leg -> EAcc	0.072	0.747	NS
H5e	Cap -> EAcc	0.288	2.182**	P < 0.05
#	Dev -> Muse	0.253	1.963**	P < 0.05
#	Dev -> HUse	0.315	2.427***	P < 0.01
#	Dev -> IAcc	-0.097	0.809	NS
#	MUse -> IAcc	-0.107	0.642	NS
#	HUse -> IAcc	0.472	3.967***	P < 0.01
#	Met -> IAcc	0.000	0.005	NS
#	Kno -> IAcc	0.117	1.155	NS
#	Kno -> EAcc	0.085	0.901	NS
#	Dev -> EAcc	0.082	0.882	NS
#	HUse -> EAcc	-0.131	1.159	NS
#	IAcc -> EAcc	0.398	3.184***	P < 0.01
#	MUse -> EAcc	0.160	1.306	NS
#	Met -> Com	-0.202	2.496***	P < 0.01
#	Kno -> Com	0.216	2.300**	P < 0.05
#	Leg -> Com	0.331	3.334***	P < 0.01
#	Cap -> Com	0.271	2.723***	P < 0.01
#	Kno -> Met	-0.174	1.571	NS
#	Leg -> Cap	0.198	1.629	NS

*Legend:*

# new potential hypothesis, NS=not significant, \*\*\*=highly significant, \*\*=significant, \*=marginally significant, Note: critical t-value: 1.64 P<0.05 and 2.33 P<0.01 (one-tailed)



**Figure 6.3: Significant Relationships—New Model**

*Legend:*

Com = management commitment, Met = metric difficulties, Kno = technical knowledge, Leg = legislative requirements, Dev = development of indicator, MUse = managerial use of indicator, HUse = higher use of indicator, IAcc = internal accountability, EAcc = external accountability, Cap = organisational capacity- Path coefficient in bold = highly significant relationship

Consistent with the results from initial model, the new model also indicated that management commitment had a central role amongst variables tested. In the initial model, five paths involving management commitment were highly significant, whilst in the new model, the results were even stronger with six paths having highly significant relationships. The strongest relationship was between management

commitment and managerial use of indicators with a coefficient of 0.447 and a t-value of 4.014. Figure 6.3 depicts all significant relationships among the variables tested.

It appeared that management commitment was significantly influenced by four independent variables: 1) organisational capacity (Cap); 2) legislative requirements (Leg); 3) technical knowledge (Kno); and 4) metric difficulties (Met). Management commitment, in turn, had a significant impact on the other four variables: 1) development of indicators (Dev); 2) managerial use of indicators (MUse); 3) higher use of indicators (HUse); and 4) internal accountability (IAcc). Next, the development of indicators had an impact on the use of indicators at both managerial and higher level management in ILG. Finally, higher use of indicators significantly affected internal accountability, and ultimately, would have an impact on external accountability (EAcc).

## 6.8 Initial and New Model Partial Least Squares Results Compared

To achieve further explanation and to sharpen the analysis, it was important to make a comparison between the old and new models. Table 6.10 presents a hypotheses testing results comparison between the initial and new models using PLS.

**Table 6.10: Comparison t values of Initial Model and New Model**

No.	Hypothesis	Path	Initial Model	New Model
1	H1a	Met -> Dev	1.956 <sup>++</sup>	1.859 <sup>++</sup>
2	H2a	Kno -> Dev	2.224 <sup>++</sup>	2.363 <sup>+++</sup>
3	H3a	Com -> Dev	2.534 <sup>+++</sup>	3.108 <sup>+++</sup>
4	H4a	Leg -> Dev	2.735 <sup>+++</sup>	2.801 <sup>+++</sup>
5	H1b	Met -> MUse	1.500 <sup>0</sup>	0.785 <sup>0</sup>
6	H2b *	Kno -> MUse	2.077 <sup>++</sup>	1.424 <sup>0</sup>
7	H3b	Com -> MUse	7.243 <sup>+++</sup>	4.014 <sup>+++</sup>
8	H4b *	Leg -> MUse	2.346 <sup>+++</sup>	1.446 <sup>0</sup>
9	H1c	Met -> HUse	0.020 <sup>0</sup>	0.493 <sup>0</sup>
10	H2c	Kno -> HUse	0.854 <sup>0</sup>	0.422 <sup>0</sup>
11	H3c	Com -> HUse	3.498 <sup>+++</sup>	2.277 <sup>++</sup>
12	H4c	Leg -> HUse	0.987 <sup>0</sup>	0.381 <sup>0</sup>
13	H3d	Com -> IAcc	3.621 <sup>+++</sup>	2.859 <sup>+++</sup>
14	H4d	Leg -> IAcc	2.298 <sup>++</sup>	1.747 <sup>++</sup>
15	H5d	Cap -> IAcc	0.346 <sup>0</sup>	0.086 <sup>0</sup>

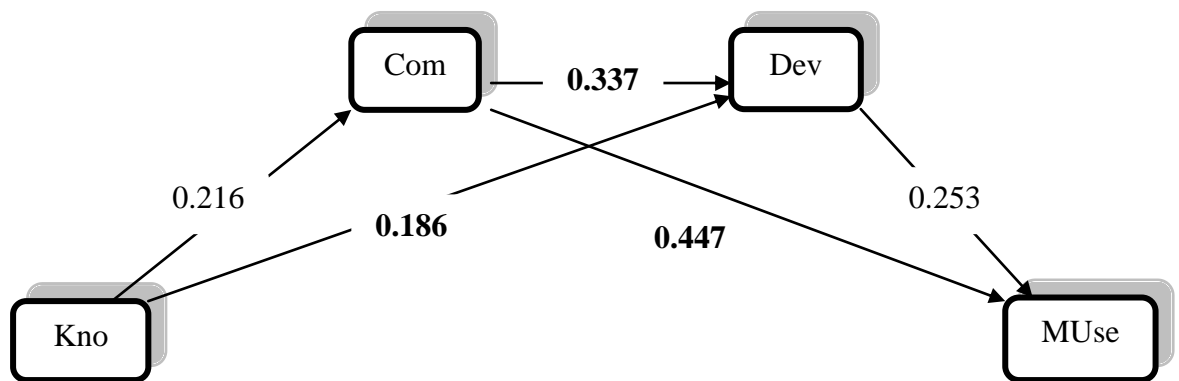
No.	Hypothesis	Path	Initial Model	New Model
16	H3e *	Com -> EAcc	3.449 <sup>+++</sup>	0.500 <sup>0</sup>
17	H4e *	Leg -> EAcc	2.618 <sup>+++</sup>	0.747 <sup>0</sup>
18	H5e	Cap -> EAcc	2.398 <sup>+++</sup>	2.182 <sup>++</sup>

Legend: +++=highly significant, ++=significant, +=marginally significant, 0=not significant

As provided in the table above, the results for the majority of hypotheses were very similar for both models and there were no major variations. However, there were exceptions for four hypotheses. Contrasting to the results found in the initial model, in the new model, there were no significant results found for those four hypotheses (H2b, H4b, H3e, and H4e). Hence, these seemingly contradictory results needed further explanation. Interestingly, the PLS analysis enabled the researcher to create a new model to uncover many new relationships, or even a chain of relationships, not included in the initial model. This provided assistance in explaining inconsistent results regarding the four hypotheses previously mentioned. The explanation is provided next.

### Hypothesis H2b

The results provided no support for hypothesis H2b: "*Managerial use of indicators is positively associated with related technical knowledge*". The score 1.424 was lower than the cut-off point of 1.64 ( $P < 0.05$ ). This was inconsistency with the result obtained from the initial model. However, other significant relationships emerged and lead to an indirect relationship between technical knowledge and managerial use of indicators. Figure 6.4 presents these new relationships.



**Figure 6.4: New Model for Kno and MUse**

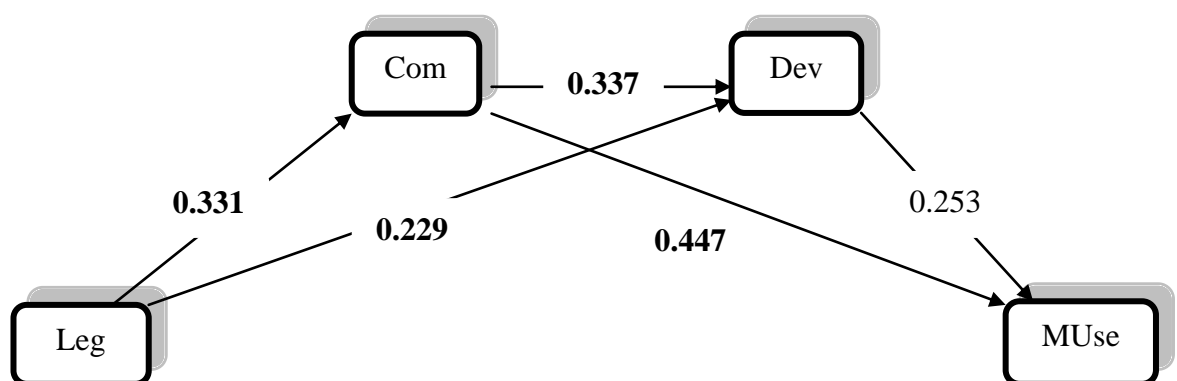
The results showed that technical knowledge had no direct relationship to managerial use of indicators. However, they related indirectly through the intervening variable of either management commitment or development of indicators or both.

This implied three possible scenarios:

1. As the knowledge of managers increases, their commitment improves, and as a result, they make more use of performance indicators.
2. As the knowledge of managers increases, they are able to develop more indicators, and as a result, they make more use of performance indicators.
3. As the knowledge of managers increases, their commitment improves and motivates them to develop more indicators, and in the end, they make use of performance indicators more frequently.

#### Hypothesis H4b

The results showed no support for hypothesis H4b: "*Managerial use of indicators is positively associated with legislative requirements*". The score 1.446 was lower than the cut-off point of 1.64 ( $P < 0.05$ ). As in H2b, this is inconsistent with the result obtained from the initial model. However, other significant relationships emerged and lead to an indirect relationship between legislative requirements and managerial use of indicators. Figure 6.5 presents these new relationships.



**Figure 6.5: New Model for Leg and MUse**

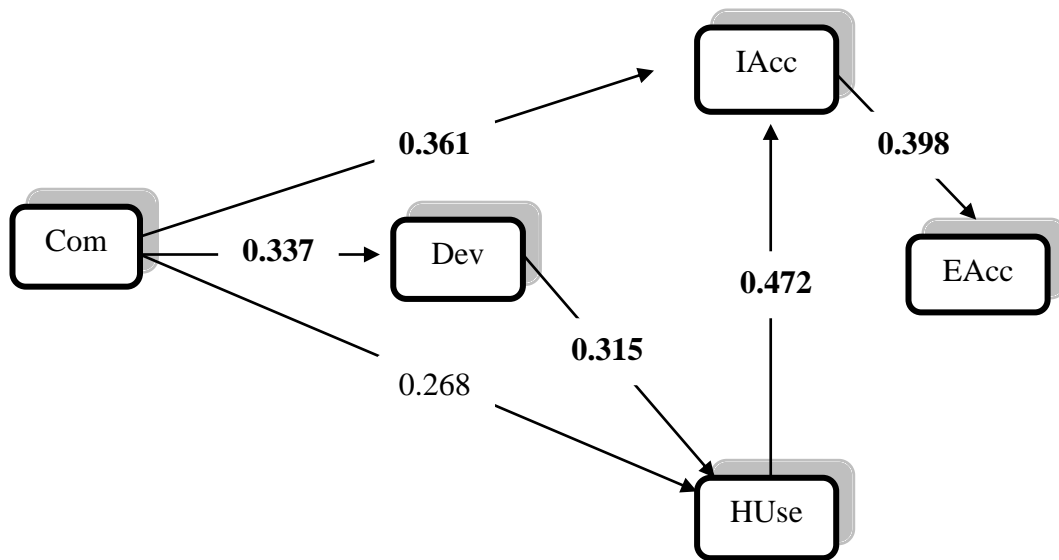


This result implied that the use of indicators at the managerial level was not affected directly by regulatory requirements imposed on ILG. It seemed that regulations had an effect on management commitment and development of indicators, and in turn, would influence the use of indicators at the managerial level. Despite the different results, these findings also indicated the existence of *coercive isomorphism*. Once again, management commitment and the development of indicators acted as intervening variables for this relationship. Using the same logic as with the case of H2b, three possible scenarios could be used to explain the relationship between legislative requirements and managerial use of indicators in ILG:

1. The mandatory nature of the regulations forces ILG officials to commit to make more use of performance indicators.
2. The mandatory nature of the regulations forces ILG officials to develop and then to make use of performance indicators.
3. The mandatory nature of the regulations forces ILG officials to commit and then to develop indicators, and in the end, to make use of the performance indicators they developed.

### **Hypothesis H3e**

The results provided no support for hypothesis H3e: "*External accountability is positively associated with management commitment*". The score 0.500 was well below the cut-off point of 2.33 ( $P < 0.01$ ). This was inconsistent with the result obtained from the initial model. However, new significant relationships among other variables occurred; they are shown in Figure 6.6.

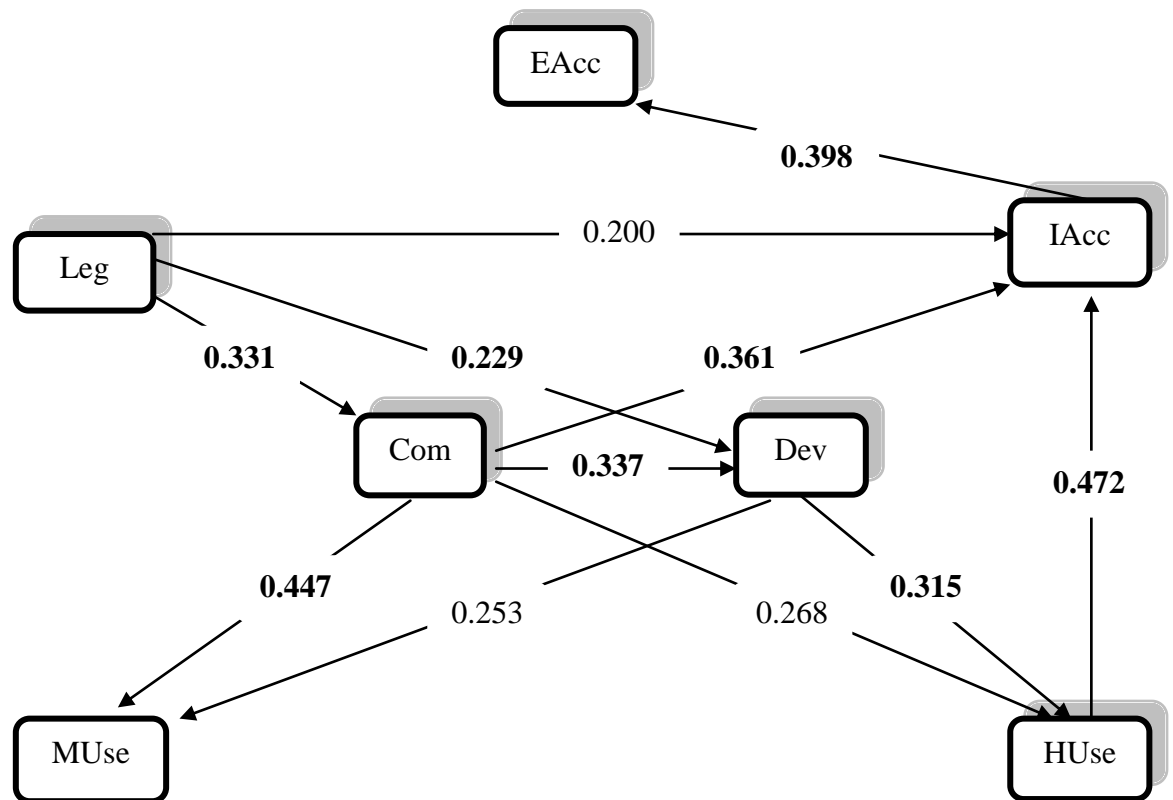


**Figure 6.6: New Model for Com and EAcc**

This implied that the extent of external accountability was affected indirectly by the officers' commitment through three other variables functioning as intervening variables: 1) development of indicators, 2) higher use of indicators, and 3) internal accountability.

#### **Hypothesis H4e**

The result provided no support for hypothesis H4e: "*External accountability is positively associated with legislative requirements*". The score 0.747 was far lower than the cut-off point of 2.33 ( $P < 0.01$ ) and was not in agreement with the result obtained from the initial model. New significant relationships among other variables occurred for this hypotheses; they are presented in Figure 6.7.



**Figure 6.7: New Model for Leg and EAcc**

In the case of hypothesis H4e (legislative requirements → external accountability), an interesting logical explanation could be drawn from the new model where there was actually a chain involving many variables with very strong relationships (i.e. the chain involves legislative requirement → management commitment → development of indicators → higher use of indicators → internal accountability → external accountability).

Based on the logical sequence of this chain, it could be inferred that a new legislation might not directly affect external accountability. However, it could improve external accountability indirectly through the improvement of management commitment, development of indicators, higher use of indicators, and internal accountability. In summary, PLS analysis offered many interesting new paths to be explored in future research in order to understand relationships among variables better.

## **6.9 Summary**

This chapter has detailed and tested the measurement model and the structural model of the study using PLS analysis. The chapter revealed that both OLS and PLS provided consistent results and supported and rejected exactly the same hypotheses. However, in general, PLS showed stronger results and provided avenues to extend new relationships among variables. Based on the initial model results, a new model was proposed and analysed with PLS and the results were discussed in comparison to the initial model. The majority of the results from the new model confirmed the results from the initial model. Out of eighteen hypotheses tested, only four showed inconsistencies (H2b, H4b, H3e, H4e). The new model offered eight new relationships among variables within the model. Four of them showed highly significant associations, while the other four indicated significant associations. PLS analysis revealed many possible relationships not included in the initial model. This will assist in refining the old model; it also opens opportunities for future research.

## **Chapter 7: Qualitative Analysis—Interviews**

### **7.1 Introduction**

In the previous two chapters, the empirical findings from the survey were discussed to provide answers to the first research question using a quantitative approach. Descriptive statistics and hypotheses testing using OLS regression and PLS were used in the analysis. The results showed that the development and use of performance indicators in ILG were influenced by several technical and organisational factors: metrics difficulties, technical knowledge, management commitment, and legislative requirements. The results also provided an indication of the existence of three isomorphic pressures—coercive, mimetic, and normative—in the development and use of performance indicators.

Given the nature of the method and subsequent analysis, the results from the survey provided a tentative indication of the existence of institutional isomorphism. Therefore, a number of these findings were then utilised to help in guiding the development of interview questions for in depth, face-to face interviews with relevant ILG officials. This qualitative approach, as the second stage of the study, was designed not only to confirm empirical results but also to provide insight into institutional isomorphism as one explanation for ILG's use and development of performance indicators. The interviews provided a pathway to answer the fourth research question, "Does institutional isomorphism exist in the development and use of PMS and accountability practice in ILG?"

In this chapter, evidence collected from the interviews with selected ILG officials is examined and discussed. The qualitative analytical tool used is thematic analysis. The chapter begins with an overview of the interviews, followed by an analysis of the responses. Among the most crucial issues discussed are the three isomorphic pressures (coercive, mimetic and normative), the factors influencing development and use of performance indicators, the factors impeding PMS success, the reasons for accountability, and finally, the challenges to achieving accountability.

This chapter ameliorates the empirical results with an institutional perspective of performance measurement and accountability practices in the Indonesian public sector, especially in ILG.

## **7.2 Interviews**

Interviews were conducted with selected officials from Indonesian local governments. The main objective of the interviews was to determine whether the empirical findings presented in the previous two quantitative analysis chapters were supported by the perceptions of ILG officials responsible for preparing the performance reports. The interviews were also conducted to obtain insights into the existence of institutional isomorphism in the development and use of performance indicators. In addition, the interviews provided other important qualitative data on respondent perceptions of accountability and performance measurement practices. In line with the objective of the study, a list of questions covering three main topics—accountability, performance measurement, and isomorphism—was prepared to provide guidance in the interviews (see Appendix A.4-1 for complete list of questions).

### **7.2.1 Overview of the interviews**

As mentioned in Chapter 4, survey packages were sent to all officials who were responsible for the production of performance reports across all ILGs during the first stage of the study. A form was included in each package to be completed by the respondent regarding his or her willingness to participate in in-depth interviews during the second stage of the study. Almost half of the respondents (48%, 47/98) completed this form indicating their willingness to participate in the interview. Table 7.1 presents a brief profile of the respondents involved in the interviews.

**Table 7.1: Profile of Interviewees**

ILG	Type	Location	Revenue *	Division	Gender
K1	District	Out-of- Java	460,934	Internal Auditor	Female
K2	District	Out-of- Java	486,821	Finance	Male
K3	District	Out-of- Java	492,713	Finance	Female
K4	District	Out-of- Java	739,782	Finance	Female
K5	District	Out-of- Java	465,003	Finance	Male
K6	District	Out-of- Java	477,197	Finance	Male
K7	City	Out-of- Java	418,417	Finance	Male
K8	City	In-Java	348,176	Finance	Female
K9	City	In-Java	375,119	Secretary	Male
K10	District	In-Java	700,427	Planning	Male
K11	City	In-Java	336,978	Secretary	Male
K12	District	In-Java	1,292,371	Secretary	Male
K13	District	In-Java	901,208	Planning	Male
K14	City	In-Java	715,241	Secretary	Male
K15	District	Out-of- Java	639,691	Finance	Male
K16	District	Out-of- Java	791,257	Finance	Male
K17	City	In-Java	703,967	Secretary	Male
K18	District	Out-of- Java	918,290	Finance	Male
K19	District	In-Java	864,314	Finance	Female
K20	City	Out-of- Java	706,573	Finance	Female
K21	District	In-Java	575,115	Secretary	Male
K22	District	In-Java	709,502	Planning	Male
K23	District	In-Java	909,361	Internal Auditor	Female
K24	District	In-Java	829,475	Secretary	Male

*Note:* \* IDR millions

Purposive sampling was used to select the 24 ILG officials from among those indicating their willingness to participate. They were deliberately chosen so that there was a relatively balanced representation of the samples. Therefore, the selection of the interviewees was based on several aspects including type, location, size, managerial position, and gender. Time and financial constraints of the researcher were also considered.

As Table 7.1 shows, the interviewees came from different types of ILGs (seven cities and seventeen districts), different locations (thirteen in-Java and eleven out-of-Java), and various managerial positions. Interviews ranged from half an hour to two hours in length. Seven females and seventeen males were involved in the interviews. Female representation was quite high (29%) given the low proportion of female officials (9%) in the ILG population. Reasons for this high response rate from females could have indicated that women tended to be more open to outside

assistance and opinion than were their male counterparts. In a study on the comparison of male and female city managers, Fox and Schumann (1996) found that female managers were more likely than their counterparts to embrace a style of management that relied on input from others (e.g. citizens). Findings here would appear to support that.

### **7.3 Thematic Analysis**

The qualitative data was analysed using thematic content analysis, which can be defined as a method for identifying, analysing and reporting patterns (themes) within a set of data (Braun and Clarke, 2006). This section provides the results of the thematic analysis of the responses collected from the interviews. As explained in Chapter 4, a semi-structured interview guide was used during the interview process. All interview questions were open-ended to allow respondents to state their opinions through a free flowing discussion. The supporting evidence on the existence of the three types of isomorphic pressures are discussed at the beginning of this section followed by discussions on further insights into the factors influencing the development and use of performance indicators, and the factors impeding PMSs. The reasons for accountability and the challenges to achieving accountability are discussed at the end of the chapter.

#### **7.3.1 Answering the fourth research question**

One of the reasons for conducting the interviews was to obtain evidence on the possible existence of institutional isomorphism in the development and use of performance indicators in ILG. As part of institutional theory, the concept of isomorphism is by no means new to public sector literature (see e.g., Lounsbury, 2007). Tuttle and Dillard (2007) provide one such study that uses the three types of isomorphism suggested by DiMaggio and Powell (1983) —coercive, mimetic, and normative. As suggested by the words, coercive refers to organisations being forced into a certain course of action; mimetic refers to organisations copying each other; and normative refers to the professionalisation of norms (; Dacin, 1997). It is suspected that the three types of isomorphic pressures have the potential to affect the development and use of performance indicators in Indonesia.



To collect the information needed for further analysis regarding the possible existence of isomorphic pressures, interviewees were asked several relevant questions (refer questions under "Isomorphism" in the interview guide).

Using the three isomorphism categories as the themes, Table 7.2 presents a summary of interview results regarding the process of performance report preparation. The three isomorphic pressures potentially affect the development and use of performance indicators in ILG.

**Table 7.2: Performance Reporting Preparation Process**

Performance Report Preparation	Theme	Number of Responses
<i>refer to:</i>		
Regulation & Guidelines	Coercive	15(62.5%)
Other ILG Report	Mimetic	6(25.0%)
Other Government Report	Mimetic	3(12.5%)
<i>assisted by:</i>		
BPKP	Normative	12(50.0%)
Local University	Normative	5(21.5%)
Independent Consultant	Normative	2( 8.0%)
Menpan	Normative	2( 8.0%)
Others (BPK, LAN, Internal Unit)	Normative	3(12.5%)

Referring back to the interview guide (Appendix A.4-3), Questions 20 and 23 were raised to provide insight into coercive pressures. Secondly, Questions 25 and 26 were used to uncover the existence of mimetic pressures. The majority of ILG officials (62.5%) pointed out that the main reference in the development and use of performance indicators were regulations and guidelines issued by the central government. Other local government reports and some other general government reports were referred to by 25% and 12.5% of ILG officials, respectively. Thirdly, to provide some explanation of the existence of normative pressures, Question 28 was included. Half of the interviewees stated that in the process of PMS implementation they received assistance from BPKP. Others got help from the local university, independent consultants, other central government institutions (i.e. Menpan, BPK and LAN), and from internal units such as the internal auditor department.

The evidence on the three common themes (coercive, mimetic, and normative), acquired from the interviews and relevant to the investigation of institutional isomorphism, is further discussed in more detail in the following sections.

### *Coercive isomorphism*

One major driver behind the adoption of a new system, including PMS, is pressure from regulation (Katharina, Matook, & Rohde, 2009). This also applies to the adoption of PMS in Indonesia. Since the emergence of Inpres No.7/1999 just a year after the fall of the authoritarian regime under President Soeharto, government entities at all levels, including local governments, turned their attention to performance reporting. This regulation required all government entities to submit performance reports to the central government annually.

Despite the potential benefits PMS offers to ILG in the midst of their efforts to enhance accountability, the majority of ILGs were actually not ready to implement the system. Many ILGs claimed that they had little time and that they were still struggling with low technical capability, especially with their relatively low quality of human resources. As the submission of performance reports is compulsory, ILGs were forced to adopt PMS despite the fact that they were not ready to do so. In preparation, they needed to install new systems capable of producing the required reports.

As confirmed by the interviews, the main driver of the adoption of PMS was a law (e.g. Inpres No. 7/1999) compelling ILG to introduce PMS for measuring and reporting performance indicators. Therefore, the adoption was not so that they could utilise a better managerial tool; it was driven simply by the need to comply with regulatory requirement.

Since the emergence of Inpres No.7/1999 we are required to prepare and submit a performance report. It's compulsory. (K21, Secretary)

Since the emergence of regulation regarding performance reporting, we are forced [by central government] to prepare and submit performance report. (K22, Planning)

It can be seen from these comments that there was consensus among ILG officials that the central government regulation on performance reporting forced the ILGs to submit a performance report despite the fact that ILGs were facing many difficulties in producing the reports.

Although ILGs are allegedly autonomous, they are still financially dependent on the central government to some extent. The shared funds ILGs receive are determined by the central government via a national budget allocation process. One important requirement before the fund can be transferred to a particular ILG is LAKIP submission. As a result, the compulsory nature of the regulation has forced government organisations, including ILGs, to comply with it regardless of their unpreparedness to implement the systems. ILG has no other choice but to comply with the regulation if they do not want to face adverse consequences in their budgets. The most common example of such consequences is a delay of fund transfer from the central to local government pending the submission of the reports. This explains why the majority of respondents ranked this factor highest on the list. The result is consistent with DiMaggio's and Powell's (1983) claim that coercive isomorphism is more likely to occur when there is financial dependence.

#### *Mimetic isomorphism*

In the era of reforms, many new regulations from central governments affecting ILG have emerged and are often overlapping; some are even in conflict with each other. In a situation like this, an ILG, which possesses insufficient knowledge to choose the right course of action, would simply mimic the behaviour of others considered as successful in pursuing legitimacy (Haveman, 1993).

Moreover, when successful adaptation is not well understood and it is difficult to evaluate a program output directly, an easy path is to copy what others have done well. From the interviews, many ILG officials, especially the ones located out-of-Java or those from ILGs with fewer resources, stated their agreement regarding the practice of copying the performance reports of others.

When it comes to preparing the performance report, initially we refer to other leading ILG as we as a relatively less advanced organisation need to learn from other more advanced ones. (K4, Finance)

Yes, we first refer to the nearest ILG and as we were unhappy with that we then turn to the better example from in-Java ILG. (K5, Finance)

We first tried our best then refer to other ILG in regard to the format of the report. (K6, Finance)

With regard to the performance report, my ILG was copying the report from provincial government and sharing this information with other ILG. (K18, Finance)

When preparing performance report we were getting examples and copying the practices of other ILG. (K19, Finance)

It is apparent from responses presented above that many of the ILGs saw copying best practice from others as the safe and easy way to comply with the regulations. Interview results indeed provided evidence that ILGs did copy the practice of performance reporting from other government organisations, either at local or provincial levels. There was a tendency for smaller ILGs to use larger ILGs as the benchmark in producing performance reports. In addition, there was also evidence that out-of-Java ILGs copied the practices of in-Java ILGs.

Three findings from the quantitative analysis presented in Chapter 5 were extended and supported here: 1) the extent of development and use of performance indicators in larger ILGs was higher than in the smaller ones; 2) in-Java ILGs tended to be more concerned with PMS than out-of-Java ILGs; and 3) the urban-type ILGs (usually better-resourced) expressed more interest in PMS than did the rural-type ILGs (usually less well resourced). Interview results were able to explain these initial findings further. From the quotations above, many interviewees from small ILGs mentioned that, given their low capability, to produce performance reports, they needed to refer to the large ILGs' performance reports as examples. With regard to resources, out-of-Java ILGs tended to lag behind in-Java ILGs. This was also the case with rural-type ILGs and urban-type ILGs. It is not an uncommon phenomenon that smaller organisations copy the practices of the larger ones. These results were

consistent with those previously reported by Ryan and Purcell (2004) and Collin, Tagesson, Andersson, Cato, and Hansson (2009).

### *Normative isomorphism*

The majority of respondents stated that the PMS they adopted was designed by an external consultant (mainly BPKP, refer to Table 7.2 for details)<sup>21</sup>, with active participation of a team established internally and comprised of relevant ILG employees. This team, that represented the recipients of the systems, acquired the knowledge through interaction with the external consultant. Some respondents also mentioned the role the university played in shaping their knowledge on many topics in public management, including PMS.

### *The Role of Auditors*

Given the low quality of employees and officials in the majority of ILGs, the role of professionals from outside the organisation, such as BPKP, was crucial to reduce errors and increase the chance of success in adopting and implementing institutionalised practices (Joon & Jasook, 2010).

With regard to preparing performance reports, due to this lack of capable staff, many ILGs looked for help from expertise outside their organisations. One way of doing that was by requesting technical assistance from BPKP. As the central government audit office, BPKP had the capability and capacity to help other government organisations such as ILGs in their effort to enhance their capacity. BPKP had a long history of working with ILGs in their capacity of providing audit services. Hence, from the point of view of the ILGs, BPKP was the right organisation to provide assistance.

Initially we asked for help from BPKP to prepare performance report. (K15, Finance)

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<sup>21</sup> BPKP (Badan Pemeriksa Keuangan dan Pembangunan) is a central government agency who responsible for providing audit and consulting services to other government entities. <http://www.bpkp.go.id/>

At the early stage, BPKP provided technical assistance to us. They provide us with some kind of in-house consultation in preparing performance report. (K21, Secretary)

At the beginning, we got help from BPKP. (K22, Planning)

We directly asked for technical assistance on the adoption and implementation of PMS from BPKP. In the process, there were transfers of knowledge from them to us. Over time as we gain some of the knowledge, the role of BPKP was gradually reduced. (K23, Internal Auditor)

It is clear, from all comments cited above, that the role of BPKP was central in assisting ILGs in implementing PMS, especially in the early stage of the implementation as local officials and employees needed to learn the new systems.

Working with many diverse ILGs over a relatively long period enabled experts from BPKP to diffuse knowledge and best practices in developing performance indicators as they moved from one ILG to the next.

Traditionally, almost all ILGs have struggled with their low quality of employees and officials. In the past, under the centralistic government, this did not seem to be a real problem as ILGs were an integral part of government as a whole. Hence, employees and officials at the local level were only implementing pre-determined programs and policies driven from the top.

Since the era of reform began, when local autonomy commenced, ILGs became more independent in conducting their day-to-day tasks of providing public services to their local people. These changes required ILGs to have more capable employees and officials than ever before, as they needed to manage everything by themselves, without direct involvement from the central government.

### *The Role of University*

Interviews results revealed that local universities also provide a major contribution in helping ILGs with their management problems, including those related to PMS.

We were so lucky to have high quality well-reputed universities in our neighbourhood so we had a good opportunity to benefit from them [to access their high-quality education programs and expertise]. Universities assisted us in the early-stage of LAKIP implementation. For a long-term purpose, we sent our employees to both for short-term non-degree programs (i.e. training/seminar/workshop in performance measurement/management) or for degree programs (i.e. master degree in public management). We did that in the past and will continue to do so as we believed in quality education to build our capacity. (K17, Secretary)

There has been a nation-wide trend in the last decade for many organisations to send their employees for further education to universities. ILGs across Indonesia were no exception as many universities, especially the large ones, promptly responded to the emerging needs by offering new degree/non-degree programs such as public sector accounting and public management/administration.

While attending educational programs in universities, ILG employees had the opportunity to gain new management skills and knowledge in PMS as they studied theories as well as examples of best practice in the classroom. They also had the opportunity to share their experiences of PMS implementation with their colleagues from other ILGs across the nation. When they returned to their work places, they could share this new knowledge and experience with their colleagues. Thousands of ILG employees and officials attended and graduated from such programs. As a result, they brought about changes in their ILGs and made the practice of performance reporting more homogeneous than before. DiMaggio and Powell (1983) argued that the more educated the workforce became, in terms of academic qualifications and participation in professional and trade associations, the greater the extent to which organisations would become similar to other organisations in the field. In this case, the quality of performance reports was expected to improve in the future as many officials who undertook further degrees at universities returned to their ILGs.

It is clear that ILG have benefited from outside expertise such as from BPKP or universities in dealing with PMS. The situation would enable normative isomorphism to take place in the process as organisations attempting to follow best practices or normative guidelines (Dacin, 1997).

### **7.3.2 Factors influencing the development and use of performance indicators**

In the previous two chapters, four factors—legislative requirements, metrics difficulties, technical knowledge, and management commitment—were found as the factors that significantly influenced the development and use of performance indicators in ILG. These findings were based on survey responses, and therefore, as in any survey, the results might have had potential bias due to respondents' subjectivity. Given this inherent weakness, further evidence through interviews was needed to anticipate the potential weaknesses, and hence, to strengthen the findings. Interviewees were asked why their organisations developed performance indicators. The interviews confirmed that all four factors influenced the development of performance indicators in ILG. In general, all the interviewees claimed that they faced challenges related to all the factors in the model in dealing with performance reporting issues.

The most common reason for developing performance indicators in ILG was the existence of legislative requirements from the central government, which began with the emergence of new regulations regarding accountability reporting (well-known in Indonesia as LAKIP) at the beginning of reform era in 1999.

To be honest with you, for the time being, we developed performance indicators simply to fulfil regulation requirement. Besides, so far there has not been a performance audit carried out. Auditors are only concerned about ILG's financial performance. (K7, Finance)

We developed performance indicators as it was part of our obligation to follow instructions from central government [as regulation requirement]. Even though we actually need performance information as well to make sure we achieved results, in this matter regulation requirements were central. (K15, Planning)

These responses were also examples of the existence of coercive pressure imposed by regulations. Officials viewed this force as the major driver behind the development of performance indicators; while the use of performance information to assist managerial need was only secondary. However, some interviewees stated that there was a real need to improve ILG performance in providing quality services to the people. To fulfil this goal, a managerial tool such as PMS was needed to provide



information required to monitor and evaluate performance of activities or programs carried out by ILG.

Despite the fact that the majority of respondents claimed that regulation requirements were the main reasons behind the development and use of performance indicators, some did point out that their reasons were more about increasing performance in order to provide better service quality to the public.

We developed performance indicators to improve our performance in providing services to the people. (K17, Secretary)

We developed performance indicators to measure the level of success of our activities carried out by ILG. (K14, Secretary)

These statements came from better-resourced ILGs located in urban Java. As this ILG was located in an urban area with highly demanding, well-educated people, it needed to ensure that the PMS was used for decision making and not just implemented as a mere formality. In other words, to this ILG, complying with the central regulation was necessary; however, improving public service quality on a continual basis to local people as the main stakeholders was just as, if not more, important. To fulfil this crucial task, the ILG needed an effective PMS in place.

Interview results also revealed that all interviewees did confirm the survey findings on the factors influencing the development and use of performance indicators.

Yes, I agree with all the four factors mentioned in the model. (K17, Secretary)

All respondents agreed on all four factors affecting the development and use of performance indicators presented in the research model. They were also asked to rank the relative importance of the factors. Table 7.3 summarises these rankings in relation to how the items influenced the development and use of indicators in ILG.

**Table 7.3: Factor Affecting Development of Indicators**

The Most Influencing Factor	Development	Use
	Number of Responses	
Legislative Requirements	10 (42%)	12 (50%)
Metrics Difficulties	6 (25%)	6 (25%)
Technical Knowledge	6 (25%)	4 (17%)
Management Commitment	2 ( 8%)	2 ( 8%)

It is obvious from the table above that regulation requirements had the strongest effect on both the development and use of performance indicators followed by metrics difficulties, technical knowledge, and management commitment. In general, these interview findings were consistent with the survey results.

#### *Legislative requirements*

As shown in Table 7.3, the majority of interviewees (42% for the development and 50% for the use) considered that regulation requirement was the dominant influencing factor for the development and use of performance indicators. With respect to this matter, one interviewee said:

Due to strong external pressures often central government issues new regulations in a rush and then forces lower tiers of government, such as local governments, to comply. Regulation on performance reporting was a good example for that. (K17, Secretary)

With the introduction of various reforms (detailed in Chapter 1), the Indonesian central government had to respond to the demand from the public regarding many aspects of public policies. In addition, it also needed to deal with international bodies (i.e. IMF, World Bank) regarding governance matters for the new Indonesia. This situation created a lot of pressure on the central government, often resulting in the issuance of new regulations in haste and without comprehensive consideration. The regulation on PMS is a good example of this. Like most countries in the world, Indonesia is open to the effects of globalisation in almost every aspect of life, including in public sector accountability.

Following the fall of the old repressive regime, the Indonesian government, at every level, has faced a great deal of pressure from the public. As the democratic climate

changed drastically, people had an opportunity to ask openly for a more accountable government. As a result, in the early stage of the reform, Majelis Permusyawaratan Rakyat (MPR),<sup>22</sup> as the highest body of people representatives, issued Tap MPR-RI No.XI/MPR/1998, which was a law on having a government that was free from corruption, collusion, and nepotism. Subsequent to this law, the President of The Republic of Indonesia, as the central government top executive, issued an instruction regarding governmental, institutional, performance accountability, which was Inpres No.7/1999. This instruction required government organisations, including ILG, to submit a performance report annually starting from the fiscal year 2000.

In the first year of the implementation of LAKIP, it was very difficult, if not impossible, due to time constraints, for ILG to prepare a quality performance report. Given the submission was compulsory, ILG had to provide the reports in whatever format was available to them. However, the quality of the reports was far from sound.

Referring back to the results in Chapters 5 and 6, there was an interesting finding regarding the relationship between legislative requirements and use of indicators. The use of indicators at the managerial level was strongly influenced by regulation requirements. However, their use at higher levels was not. Regarding this contradictory finding, one interviewee explained:

As government official at managerial level I need to always consult and conform to any regulations (including the one related to LAKIP). That was a standard procedure explicitly stated on my job description. In short, regulations significantly affect my decisions in using performance indicators. On the other hand, Bupati (head of district) normally based his decision on a political consideration. He preferred to include information that benefits him politically. I guess that was normal as he was an elected official. (K22, Planning)

This comment provided a clear explanation of the current process and supported the empirical findings. For the top level officials, political factors were more important to consider than other organisational or technical factors.

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<sup>22</sup> People Consultative Assembly

### *Metric difficulties*

Some interviewees (25%) claimed that difficulties inherent in determining and understanding certain performance indicators, especially in the case of non-physical activities, was the dominant factor influencing the development and use of performance indicators.

With regard to this problem, one interviewee stated the following:

We also were having difficulties in determining performance indicators, especially for non-physical activities. (K17, Secretary)

One important technical issue highlighted in the performance measurement literature was directly related to the problems of metrics difficulties. The ability of ILG officials and employees to define and assess metrics, such as performance indicators, that capture desired actions and outcomes was crucial (Cavalluzzo and Ittner, 2004).

It is obvious from the comment by K17 that technical difficulties inherent in the development of indicators, especially in determining indicators for hard-to-measure, non-physical programs and activities were real problems for ILGs. It is no easy task to produce indicators to measure the success or failure of hard-to-measure programs.

In many public organisations, including ILG, employees and officials conducted many programs that were difficult to evaluate accurately using objective, quantifiable, performance indicators (e.g. poverty alleviation, transmigration (people relocation), and family planning). It was very clear that information about the outcomes of such programs was not easily accessible, and hence, was difficult to determine. This inherent problem was made worse by the fact that many ILG employees did not have enough competencies in coping with technical matters in the development and use of performance indicators.

### *Technical knowledge*

Respondents [6 (25%) for development and 4 (17%) for use] indicated that the level of technical knowledge held by ILG employees, especially knowledge in PMS, was also considered as an important influencing factor in regards to the development and use of performance indicators. For example, one interviewee pointed out that:

Technical knowledge [held by ILG employees] was also an important one but not as dominant as the regulation. When it comes to increasing the quality of human resources, we educated our employees by utilising the expertise available from the local university. (K17, Secretary)

Even though not as strong as in the regulation requirement, issues in technical knowledge were also considered important to the success of PMS implementation. Given the complexity inherent in the development and use of performance indicators, it was a logical consequence that ILG were required to have at least one employee with relatively high technical competencies. Unfortunately, for ILG, this was often not the case as the general quality of their employees and officials was still relatively low. More training is still required before improvement can occur.

This situation is not surprising, as traditionally, in many cases, the local government sector in Indonesia has only attracted second or even third class employees compared to private or government-owned enterprises. It is not uncommon that most high quality university graduates prefer to work in the private sector, including large-sized firms, multinational companies, or at least, government-owned enterprises (i.e. PERTAMINA, Telkom, etc.). From a job-seekers point of view, these organisations are ranked highly. The reason for these preferences is mainly financial as private and government-owned enterprises offer much higher salaries and excellent career opportunities than do local governments. Given that the level of competition in the job market is extremely high in Indonesia, only the brightest graduates are able to get places in these top ranked organisations. The second-layer graduates normally get positions in the medium-sized firms or in central government departments, which offer a moderate level of salary. Finally, the third-layer graduates have to accept positions in small-sized firms or in local government units. These smaller organisations offer the lowest level of salary.

Low quality employees and officials have resulted in many problems in the development and use of performance indicators. Numerous ILG employees showed their frustration in dealing with this complex and often-difficult task. The outcome was apathetic behaviour and the creation of low quality performance reports.

Many previous studies revealed the importance of technical knowledge in the success of the implementation of a new innovation in an organisation. The studies found that there is a positive association between training investments to increase technical knowledge of employees and implementation success (S.W. Anderson & Young, 1999; Kwon & Zmud, 1987).

Training in the design, implementation, and use of a management accounting innovation such as PMS allows ILG to articulate the link between the new practices and organisational objectives. This, in turn, provides a mechanism for employees to understand, accept, and feel comfortable with the innovation, and prevents employees from feeling pressured or overwhelmed by the implementation process (Shield, 1995).

#### *Management commitment*

Only two interviewees (8%) placed management commitment as the dominant influencing factor in the development and use of performance indicators in ILG. One interviewee provided an assessment on this matter:

The concept was not really well-defined yet and there's also not enough time to socialise the draft. As a result it was difficult to implement as there's lack of commitment from the ILG. (K17, Secretary)

Management commitment is one of the most crucial aspects to ensuring success in almost any management innovation (Damanpour & Schneider, 2009; Dibrell, Davis, & Craig, 2008; Eisingerich, Rubera, & Seifert, 2009). Yet, as indicated by this response, PMS implementation was hindered by a lack of commitment from the ILG's management. In many cases, without strong commitment from the management of an organisation (especially from top management), it is extremely

difficult to be successful in implementing an innovation such as PMS. When it comes to developing and using performance indicators, as in any organisational change, it is very important to note that there's a need to build high levels of commitment among senior management first and then to gather support from middle managers and staff (Fernandez & Rainey, 2006; Hal G. Rainey, 2003). Time constraints coupled with issues related to the clarity of the concept were responsible for the lack of management commitment. Clear guidance and a reasonable amount of time were needed to build a strong commitment within the management of ILG.

Unfortunately, in the case of implementing PMS in Indonesia, it is clear that the needed commitment simply did not exist. As claimed by one interviewee, quoted previously, there was lack of commitment, and therefore, it was difficult to implement PMS. The central role of management commitment for a successful PMS implementation was confirmed in the empirical chapters and it was supported here. This research revealed that lack of top management commitment was, in many cases, responsible for the low motivation amongst ILG employees. This, in turn, would impede the PMS implementation. Lack of commitment would also explain the reason behind the inconsistency of hypotheses (H4b and H4c) testing results regarding the regulation requirement. Bupati/Walikota, as elected officials, tended to commit to their political affiliation instead of adhering to regulations imposed by the central government. This explained the lack of commitment and lack of association between the higher use of indicators and regulation requirements.

A lack of management commitment was just one explanation for unsuccessful PMS implementation in ILG. Why there was a lack of commitment was the next question to answer. Interview results provided two reasons behind the lack of commitment. Firstly, the concept of PMS stated in the regulation was not well defined. The statement was too broad and ambiguous. Given that PMS was a relatively new concept for ILG and given the low quality of their officials and employees, guidelines that were more detailed were desperately needed. Secondly, the time constraint in implementing PMS was obvious. One year was definitely not enough time to implement such a complex new management tool.

In summary, even though there were only two respondents who put management commitment as the dominant factor, as shown in this section and in the empirical results, this factor was still important.

### 7.3.3 Factors impeding performance measurement systems

One of the most important goals all government, including ILG, wanted to achieve in the era of reform was to increase accountability to their stakeholders. PMS was an important tool to enable ILG to prepare performance reports as a medium to discharge their accountability obligation to their stakeholders. Success or failure in implementing the PMS was considered a crucial part in achieving accountability goals. Hence, the central government (MenPAN) conducts an evaluation of LAKIP reports annually. The LAKIP evaluation is based on five major components of performance management: (1) Performance planning, (2) Performance measurement, (3) Performance reporting, (4) Performance evaluation, and (5) Performance achievement.

Following a comprehensive evaluation process using criteria set by MenPAN, any LAKIP report is given a score from 0 to 100. The score is then grouped into the six rating categories shown in Table 7.4.

**Table 7.4: LAKIP Scoring**

Score	Rating	Meaning
85–100	AA	Excellence
75–84	A	Great
66–74	B	Very Good
50–65	CC	Good
36–49	C	Fair
0–35	D	Bad

Interview results reported in Table 7.5 suggested that only 29% of the interviewees perceived that they had a relatively high percentage in achieving their accountability goals via performance measurement (reporting). The majority (71%) of interviewees perceived that they had not achieved the level of accountability they would like.



**Table 7.5: Percentage of Success in Achieving Accountability**

Achieving Accountability	Number of Responses			
	Top	Mid	Low	Total
>75%	4	1	2	7 (29.0%)
50-75%	1	3	5	9 (37.5%)
<50%	1	4	3	8 (33.5%)

Further, this fact was supported by the central government's recent annual evaluation on LAKIP reports. Based on the 2009 LAKIP evaluation, the majority of ILGs fell into the CC (50-65) category or lower. On this occasion, the central government also published a list of city and district categories as the best ten in performance reporting. Even these top ten ILGs fell into the CC category with the highest score being only 59.35. The lowest score for LAKIP evaluation in 2009 was 17.76 (category D<sup>23</sup>) It appeared that in general, ILGs were far from successful in implementing PMS, as the evaluation score suggested.

In addition, the central government, via medium-term development plans called Rencana Pembangunan Jangka Menengah (RPJM) 2005–2010, stated that strengthening accountability and enhancing performance were priorities of the bureaucratic reform program within the next five years. Strengthening financial accountability is directed at increasing quality and transparency of financial management and it is measured by sound administration indicators, auditors' opinions, and less KKN (corruption, collusion, and nepotism). Strengthening performance accountability is measured by the percentage of government entities implementing sound LAKIP and increasing accountability of performance. It is explicitly stated in the RPJM document that, for the next five years, 100% of government entities will be expected to get an unqualified opinion in their financial statements and at least 80% of government entities will have to show sound performance accountability via LAKIP.

Given the importance of accountability via performance measurement, it is interesting and important to understand what causes failure in the implementation of

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<sup>23</sup>Resource: <http://www.menpan.go.id>

PMS in the ILG context. The interviewees were asked to respond to questions regarding three aspects that contributed to the success/failure of an innovation such as PMS and their perceived importance. These factors were: 1) direction, 2) ability, and 3) motivation.

Interview results revealed that all interviewees showed their agreement on those three factors affecting the success or failure of PMS implementation. Interviewees who held a mid-level or lower position explained that they were not motivated to implement an effective PMS, as there was not enough support from the top. They also claimed that there was less direction on how to deal with the problems they faced when preparing performance reports, especially in determining the appropriate indicators. The majority of interviewees admitted that they did not have enough knowledge to implement and understand PMS.

The interview results confirmed three main factors that were responsible for the low level of success in implementing PMS in ILG. These are listed in Table 7.6.

**Table 7.6: Factor Impeding PMS**

The Most Impeding Factor	Number of Responses
Lack of motivation	12 (50%)
Lack of direction	8 (33%)
Lack of ability	4 (17%)

Opinions from the interviewees regarding these issues follow.

In our ILG the most impeding factor which was responsible for the failure of PMS implementation was lack of motivation followed by lack of ability and lack of direction. (K5, Planning)

Many respondents explicitly mentioned lack of motivation as the crucial factor that caused the failure of PMS implementation. What caused this lack of motivation was the subsequent question. It seemed that there was a close relationship between motivation and management commitment. To increase the motivation, top management would need to show more commitment. One respondent stated:

I strongly agree to the view that lack of motivation was the most important thing in the failure of any system included PMS. Once we have motivation we'll be able to set the right direction to follow and will strive for increasing our ability to achieve our goals. However, we do need support from the top. Without that support, everything would be difficult. All depends on the leader at the top. (K1, Finance)

Along with the lack of motivation mentioned above, the interview results also revealed the low level of top management commitment. Table 7.7 below presents the percentage of top management committed to the effort of achieving accountability goals. The data was classified into three categories based on the managerial level of the interviewees to see if there was some bias in the responses they provided.

**Table 7.7: Percentage of Top Management Commitment**

Management Commitment	Management Levels			
	Top	Mid	Low	Total
>75%	6	3	2	11 (46%)
50-75%	0	2	4	6 (25%)
<50%	0	3	4	7 (29%)

Table 7.7 suggests that less than 50% of ILG officials had a high level of top management commitment. It was important to note that there was a tendency for top level officials to claim they had a high level of commitment. In contrast, the majority of low and mid-level officials claimed that top management commitment was relatively low. If this bias were taken into consideration, the percentage of top management commitment would have been much lower.

In short, lack of commitment from the top decreased the level of motivation within the organisation and resulted in a lower level of internal accountability, and thus, a lower level of external accountability. This fact confirmed the findings from the quantitative analysis in Chapter 6.

In addition to the previous three factors, one interviewee claimed that lack of coordination between units in ILG had also contributed to the low level of development and use of performance indicators,

Formally various units including technical departments were included in a team that was created to take responsibility on the development of performance indicators. This team was led by Secretary Office. However, in reality the secretary office as the leader worked alone. Other members of the team were only supplying the data needed for the preparation of the report without direct involvement in the process. (K16, Planning)

It seemed that the deviation from the "substance over form" principle also occurred in the development of the performance indicators process.<sup>24</sup> As mentioned by one of the respondents, formally a team, which was responsible for the task of producing performance indicators in ILG, consisted of officials from many different units. The purpose of this was to enable comprehensive discussions to occur before certain indicators were determined. Unfortunately, in reality, there was no real discussion among them as the leader of the team (the Secretary Office) was working alone, while the other units were only supplying data needed for the task of preparing the report.

Without direct involvement from other units, the Secretary's office alone as a coordinator unit did not have the capacity necessary to achieve the goal of producing good performance indicators. In fact, other units knew more about the programs and activities under their responsibility. Therefore, their involvement needed to be taken into account in the whole process of performance indicator development. In addition, direct involvement from other units would have increased commitment in using performance indicators in day-to-day decision making.

#### **7.3.4 Reasons for accountability**

During the interview process, participants were asked to provide relevant information regarding their experiences dealing with accountability issues within their organisations in the last ten years. The respondents were asked to provide their comments related to the fact that in the last decade there appeared to have been an increased interest regarding accountability in Indonesia in general, and in local government in particular.

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<sup>24</sup> *Substance over form* is a principle used to ensure that a report presents a relevant, accurate and complete picture of the subject being reported rather than to merely fulfill regulation requirement.

All of the interviewees firmly stated their agreement with the increasing interest in and concern about accountability issues in Indonesia. However the reasons underlying that phenomenon varied amongst ILG officials. A number of reasons were suggested with two common themes emerging regarding the reasons for increased attention to accountability issues. The first theme was an institutional factor and the second was an organisational factor. The former referred to factors related to the interrelationship between ILG and other organisations and the environment in which the ILG operated, whilst the later referred to the factors within the ILG. Table 7.8 lists the reasons behind the increasing interest in accountability by ILG.

**Table 7.8: Reasons for Accountability**

Reasons for Accountability	Theme	Number of Responses*
Transparency /Openness, Trust & Participation	Institutional	20
External Pressures (people, DPRD, NGO, etc)	Institutional	14
Shift of paradigm (centralistic to local autonomy)	Institutional	12
Regulation requirement (Inpres 7/1999)	Institutional	9
Improving bureaucracy & service quality	Organisational	8
Increasing ILG performance	Organisational	5
Reducing uncertainty	Organisational	1
Improving control	Organisational	1

*Note:* \*A total of 24 ILG were interviewed

Based on information provided in Table 7.8, it was apparent that the reasons behind the increasing interest in accountability in ILG was primarily dominated by institutional factors such as responses to demands for transparency/openness/trust/participation, external pressures, shifts of paradigm, and regulations. The reasons were less dominated by organisational factors such as the need to improve bureaucracy and quality of services, and the need to increase performance and control.

Actually, ILG is responsible to the people. Financial resources managed and spent by ILG were people's money. However, in the past, people didn't really care about this issue. ILG officials could spend the money as they like. After the local autonomy was given to ILG via the new regulations, the case was totally different. It seems that local people now put their eyes very closely on every cent of the money spent by ILG officials. In addition, this reform era was also signalled by the emergence of so many newly-established NGOs. These organisations put a lot of pressures on ILG regarding the spending of financial resources on the budget. (K9, Secretary)

In the past, under a very repressive New Order regime, people were not able to protest or question any government action or policy they thought was wrong. Silence was the preferred option in order to avoid any adverse consequences. This situation lasted for more than three decades (from 1966 to 1998) and created apathetic behaviour across the nation for a long time. During this period, government official behaviour was not questioned and accountability was inconsequential.

Given a more conducive situation, people started to express their opinions more freely and directly or via one of the newly established NGOs built to keep an eye on policies and actions of government at every level, including local government. Government officials could no longer do what they liked, as they were now accountable for their actions. Hence, accountability is now an important concept in ILG.

With respect to which aspect of accountability is the most important, from the point of view of performance report preparation, the answers were mixed. Table 7.9 summarises the responses.

**Table 7.9: The Most Importance Aspect of Accountability**

Aspect	Number of Responses
Financial	4
Non-financial	3
Both	17

One interviewee commented that

Both financial and non-financial aspects are crucial, however currently many external parties such as local people and NGOs are more concerned with financial matters...on how ILG spend the money. For example they focus only on the results of financial audits. No one seems to be concerned on performance audits. (K9, Secretary)

It is clear that both financial and non-financial performance were considered important by stakeholders of ILG. However, there was a perception that external stakeholders were more concerned with financial aspects. Many considered financial aspects more important as the figures were straightforward and easier to comprehend than non-financial aspects. Financial figures from budgets and financial reports were

also relatively easy for them to understand compared to non-financial performance indicators. The increasing incidences of corruption in government institutions were responsible for this perception.

### **7.3.5 The challenges to achieving accountability**

The interview results revealed that all interviewees have common agreement on the importance of accountability in ILG over the past ten years. Moreover, all agreed that accountability has been a much discussed topic in Indonesia in the last decade, especially in the local government environment. However, achieving accountability was not an easy task as there were many challenges for the ILG. Table 7.10 reveals some of the challenges to achieving accountability, raised by interviewees. For the purpose of analysis those various challenges were categorised into four relevant themes: (1) technical—factors such as measurability of performance indicators, (2) organisational—factors related to process within an organisation such as reward and punishment systems, (3) political—the influence of external parties such as central regulation, and (4) moral—characteristics embedded in people such as honesty. The first two themes, technical and organisational, could normally be controlled by the organisation, while political and moral factors were beyond its control. However, regardless of controllability issues, all presented challenges to achieving accountability goals.

**Table 7.10: Challenges to Accountability**

Challenges for Accountability	Theme	Number of Responses
Quality of human resources	Technical	9
Commitment	Organisational	7
Political interest	Political	7
Measurability of outcome	Technical	3
Central Regulations	Political	3
Database	Technical	3
Honesty	Moral	3
Lack of resources	Organisational	2
Low Morality	Moral	2
Quality of local representatives	Technical	2
Bad Planning	Organisational	2
Number of reports	Political	2
Resistance	Organisational	2
Money politics	Political	1
Media to discharge accountability	Political	1
Trust	Moral	1
Input focused	Organisational	1
Fat organisation	Organisational	1
Lack of reward and punishment systems	Organisational	1
Heterogeneity of population	Political	1
Difficult to maintain performance	Organisational	1
KKN	Moral	1
Red tape	Technical	1

Clearly from Table 7.10, there were three dominant challenges to achieving accountability goals: quality of human resources, commitment, and political interest. The problems caused by low quality of human resources (both employees and officials) within ILG turned out to be the most challenging factor in achieving accountability goals, followed by lack of top management commitment and political interference from political parties.

These findings were in accordance with survey results presented in Chapter 6 where there was a chain of relationship amongst variables such as technical knowledge (as a proxy of human resource quality), management commitment, and accountability. The lack of technical knowledge of ILG's employees was significantly lower than organisational commitment. Next, lack of commitment, for instance, would result in low levels of internal accountability, and in the end, would deteriorate external accountability.



Many scholars have theorised regarding the distinctions between public organisations and private organisations. The distinctions include greater reliance on political control (Damanpour & Schneider, 2009). Thus, the interview results regarding the importance of political interest in affecting accountability practices in ILGs supported this theorising. Polidano (2001) claimed that administrative and political leadership was crucial in ensuring the success of a certain reform in the public sector.

The interview results on organisational commitment strengthen the quantitative findings using OLS and PLS analysis discussed in Chapters 5 and 6, respectively. These results made management commitment a central and important influencing factor for accountability practices in ILGs. Therefore, this research supported previous studies regarding the central role in management innovation, especially in PMS as a form of management innovation to discharge accountability. As a result, management commitment was considered the central variable in a new conceptual model on PMS and accountability (discussed in detail in Chapter 8).

Relevant interview results are discussed next. Firstly, 9 interviewees (37.5%) found it difficult to achieve the goals of accountability as the quality of human resources working within ILG was low.

Achieving accountability goal is easy to say but very difficult to be done. The real challenge is lack of understanding on appropriate performance indicators to be used by employees and officials. I believed this condition exists due to the low quality of employees and officials in our organisation.  
(K4, Planning)

Given the many facets embedded in the concept of accountability, appropriate and relevant reported performance indicators are central in discharging accountability to the public. Therefore, to develop and use performance indicators that will effectively achieve accountability goals, ILGs need to have employees and officials that have the required technical capability in dealing with PMS. The key aspects of good management include planning, staffing, controlling, budgeting, and problem-solving (Kotter, 1996). Quality workers are needed for good staffing in any organisation including ILG. Unfortunately, for many ILGs, despite its importance, the quality of human resources is still a major issue.

Secondly, 7 (29%) of interviewees found it difficult to achieve the goals of accountability, as there was lack of commitment in ILG.

The main challenge in achieving accountability, in my opinion, is a lack of commitment from top level executives. Even though we in the middle or lower level officials have quite strong willingness to make an effort in achieving accountability goals it is really hard to make it happen as there is not enough support from the top. It seems that they [top level executives] did not really care about this matter. (K20, Finance)

In any aspect of management, the role of top management is crucial to make sure that any management innovation is put in place, as the final decision ultimately rests in the hands of top management. In accountability practices, this important role is no exception. For ILG, having highly motivated low and middle managers is not enough without the support of its top management.

Thirdly, 7 (29%) of the interviewees also found that political interest contributed to the difficulty in making ILG more accountable.

Based on my experience in our case there is too much political interests involved in almost every aspect of local government policy and action in enhancing ILG accountability. For example, a certain policy made by executive is considered alright at the beginning, however as the new election time approaching many opposing parties start questioning that policy in order to attract public attention. (K21, Planning)

Implied in the comments was the fact that ILGs have faced many challenges from internal and external parties. From inside the organisation, problems resulting from the low quality of their employees coupled with the low commitment of top level officials were apparent. At the same time, they had to deal with political pressure from outside the organisation (i.e. from politicians, central government officials, etc.)

To focus the analysis, the various challenges for accountability (from Table 7.10) were regrouped from four themes into three main themes: (1) political/moral were combined as they came from external parties, and hence, were uncontrollable by ILG, (2) technical, and (3) organisational, as presented in the following Table 7.11.

**Table 7.11: Summary of Challenges for Accountability**

Challenges to Accountability	Number of Responses
Political/Moral	22
Technical	18
Organisational	17

Political and moral aspects were listed as providing the greatest number of challenges followed by technical and organisational aspects. Apparently, too much political interference and alleged corruption were regarded as the main barriers to achieving accountability goals. In addition, due to the low quality of human resources and lack of infrastructure, many ILGs were still struggling with technical and organisational obstacles.

Two of the most important components of the political theme used in this thesis were political interest and central regulations. These two components from external parties appeared to affect accountability practices in ILG. In addition to those two aspects, ILGs seemed to have problems with their organisational and technical aspects (e.g. low commitment and red tape). Ohemeng (2010) argued that political aspects have an effect on commitment, and in turn, on the success of reform efforts in the public sector.

## **7.4 Summary**

This chapter has presented the data obtained from the in-depth, face-to-face interviews focusing on the experience of ILG officials in developing and using PMS. The 24 participants were asked to respond to all the open-ended questions from the interview guide. Five major issues were identified to assist in answering the fourth research question, support quantitative findings from the previous two chapters and provide suggestions for future research. These five issues were (1) the existence of three isomorphic pressures (coercive, mimetic and normative) in the adoption and implementation of PMS; (2) four factors (metric difficulties, technical knowledge, management commitment, and regulation requirement) influencing development and use of performance indicators; (3) three impeding factors (lack of direction, lack of motivation, and lack of ability) in the implementation of PMS; (4) the reasons for

increasing interest in accountability; and (5) the challenges to achieving accountability goals.

The results of the qualitative analysis indicated that all three elements of institutional isomorphism—coercive pressures, mimetic pressures and normative pressures—existed in the process of adoption and implementation of PMS in the ILG context. The interviews revealed that institutional isomorphism was a major factor that drove the decision to adopt and implement PMS in ILG because of the pressure exerted by the central government via the enactment of new regulations related to performance reporting. However, the perceived undemocratic process and the haste with which the regulations were implemented resulted in symbolic practices on performance reporting in Indonesia.

Results were used to answer the fourth research question, "Does institutional isomorphism exist in the development and use of PMS and accountability practice in ILG?" As evidenced in this chapter, all three isomorphic pressures (coercive, mimetic, and normative) influenced the adoption and implementation of PMS in ILG with coercive pressure being the most significant.

Chapter 8 links the different themes and findings together and relates them to the underlying theoretical framework presented and discussed in Chapter 3.

## **Chapter 8: Implications and Conclusions**

### **8.1 Introduction**

The aims of this chapter are to provide a summary of previous chapters, the implications of the findings, the strengths and limitations, and a recommendation for future research in the area of PMS and accountability practices in ILG. This chapter begins with a brief review of the motivation and research objectives (Section 8.2) followed by a summary of findings (Section 8.3). Research implications (Section 8.4) and practical implications (Section 8.5) are then highlighted. A discussion of the strengths and limitations of the thesis (Section 8.6) follows and the proposal for the new model (Section 8.7) is described. The final two sections regarding implications for future research (Section 8.8) and concluding remarks (Section 8.9) close the thesis.

### **8.2 Brief Review of Motivation and Research Objectives**

Within good governance and the NPM paradigm, PMS is a crucial tool for public sector organisations to achieve both internal and external goals. Internally, PMS plays an important role in assisting organisations to achieve organisational efficiency and effectiveness. Externally, PMS assists public sector organisations to increase transparency and discharge accountability to their stakeholders. Bearing those in mind, this thesis focuses on PMS and accountability practices in ILG. Specifically, it examines a model regarding technical and organisational factors influencing the development and use of performance indicators. In addition, it investigates the motivation behind the implementation of PMS and accountability practices in ILG within an institutional theory framework.

ILGs were chosen as the context of the study because they have played a major role in Indonesian society since reform commenced in 1998. In 1999, Indonesia experienced pivotal changes from a centralistic and authoritarian country to a democratic and decentralised one. Hence, Indonesia has embarked on grand scale decentralisation to respond to the demands of the reforms (Mera, 2000).

There is an indication that the outcome of the decentralisation process has not been as expected. Despite significant reform efforts, the World Bank claims that the regional budget process, for example, is not yet transparent and accountable. The budget formulation process has focused more on inputs than on implementing governments' priorities (World Bank, 2007). In general, accountability mechanisms in every level of government organisation remain weak. Therefore, to address the issue of PMS as an important tool for enhancing accountability practices in a new decentralised Indonesia, four important research questions were raised in this thesis. These research questions are summarised in Table 8.1.

**Table 8.1: Summary of Research Questions**

Research Questions		Study Phase	Data Source	Analytical Tools
1	Does ILG develop and use performance indicators?	<i>Phase-1</i>	Nation-wide postal survey of the entire population of local government in Indonesia	Descriptive analysis, t-test
2	Do metric difficulties, technical knowledge, management commitment, and regulation requirement influence the development and use of performance indicators in ILG?			OLS and PLS
3	Do management commitment, regulation requirement, and organisational capacity influence accountability practice in ILG?			
4	Does institutional isomorphism exist in the development and use of PMS and accountability practice in ILG?	<i>Phase-2</i>	Semi-structured in-depth interview with 24 ILG officials across Indonesia	Thematic content analysis using institutional isomorphism components as the main themes

The first three research questions were answered in phase one using quantitative data gathered from a postal survey covering the entire population of ILG. The answer to the final question regarding the existence of institutional isomorphism in the process of developing and using performance indicators was found in phase two. The second phase considered data obtained from semi-structured, in-depth interviews with 24 ILG officials. A summary of all findings emerging from this study is presented in the following section.

## 8.3 Summary of Findings

To provide valid and rigorous results in addressing the four research questions, both quantitative and qualitative analytical tools were employed. Analysis included descriptive statistics, t-tests, OLS, PLS, and thematic content evaluation.

### 8.3.1 Research question one

Firstly, the study used descriptive statistics analysis to answer the first research question. The survey results showed that, in general, ILG only moderately developed performance indicators (Mean = 3.45 on a scale 1 to 5). Table 8.2 presents the rank of different types of performance indicators developed in ILG to see the relative importance from the perspective of ILG officials.

**Table 8.2: Rank of Performance Indicators Developed**

Types of indicators	Mean
Output	3.74
Input	3.66
Outcome, Benefit	3.38
Efficiency	3.37
Impact	3.34
Process	3.29
Total	3.45

Output and input indicators are on the top of the list, while outcome and efficiency indicators are only moderately developed. This indicates that ILG has not ranked outcome indicators as the most important. This is not only an unexpected finding but also an ironic one, given performance-based budgeting, which normally focuses on outcome, has been implemented for over a decade. The majority of the interviews convincingly showed their agreement regarding the lack of outcome indicator development in ILG. One explanation for this was that many of the interviewees found difficulties in measuring the outcomes of government programs, such as family planning programs. It is very hard to decide what outcome indicators to use, as the success of the program is dependent upon many different factors that are not always the responsibility of the department responsible for conducting the program.

This finding was in accord with the statement made by The World Bank (2007) in its report on *"Spending for Development: Making the Most of Indonesia's New Opportunities"*.

Next, Table 8.3 presents a summary of the use of performance indicators in ILG.

**Table 8.3: Rank of Use of Performance Indicators**

Managerial Use	Mean
1. setting strategy	3.71
2. coordinating program	3.67
3. allocating resources	3.62
4. refining program	3.32
5. setting job expectation	3.28
6. adopting new program	3.18
7. setting performance goal	3.14
8. rewarding employees	3.04
Total	3.37
Higher Use	
1. Funding decisions	3.52
2. Changes management	3.50
3. Develop budget	3.16
Total	3.39

As in the case of developing indicators, the survey indicated that ILG only moderately used performance indicators. Performance indicators were used at both the managerial level (mean = 3.37) and the higher level (mean = 3.39). At the managerial level, ILG used performance indicators mainly for setting strategy, coordinating programs, and allocating resources, whilst at the higher level, they were used for funding decisions and changes in management. At both levels, less emphasis was placed on rewarding employees (mean = 3.04) and developing budgets (mean = 3.16). This finding indicates that the practice of performance-based budgeting in ILG, which was expected to integrate performance indicators into the budget document as well as to facilitate the evaluation of employee performance, is questionable. These findings support those of Ho (2005) where the issue of integrating PMS into other systems (e.g. reward and punishment system) of government organisations is central to implementation success.



Another interesting finding was the fact that the majority of ILGs have given more emphasis to more general information (e.g. setting priority goal) than to specific information regarding performance measurement (e.g. comparison on indicators). This is quite unexpected given PMS has been in place for more than a decade. This fact may indicate the existence of barriers to the development and use of performance indicators. Despite a decade of implementation, ILG still struggles with performance indicators. Interviews confirmed that ILG officials still have technical difficulties in developing and using performance indicators.

Moreover, during the interviews, the majority of interviewees admitted that they used performance indicators simply for the sake of producing the mandatory performance reports required by central regulations without considering their real use of improving organisational performance. This supports the claim of Cavalluzzo and Ittner (2004) that implementation of externally mandated PMS was used merely to fulfil regulation requirements and was only symbolic in nature without any real impact on the performance of organisations.

In addition, descriptive analysis also provided the opportunity to make comparisons regarding the extent of development of indicators, use (both managerial and higher level) of performance indicators, and accountability (both internal and external) for different sizes, types, and locations of ILG. The comparison is summarised in Table 8.4. and Table 8.5.

**Table 8.4: Comparison on the Extent of Development and Use of Indicators**

	Development	Use	
		Managerial	Higher
Type	Different	No difference	Different
Location	Different	No difference	No difference
Size	No difference	No difference	No difference

With regard to developing performance indicators, the survey revealed that the size of the ILG did not really matter. The extent of the performance indicator development was indifferent regardless of the size of the ILG. The type (district or city) and the location (Java or out-of Java) of the ILG, however, did make a difference. City governments tended to develop more indicators than did district

governments. The mean for development of indicators was 3.75 and 3.36, respectively. Similarly, in-Java ILGs were generally developing more indicators than those out-of-Java. The mean was 3.65 and 3.29, respectively.

One possible explanation for these findings is that ILG officials, who come from the city or in-Java ILGs, tended to have a better knowledge and understanding of the issues related to adoption and implementation of performance management. This was evident during the interviews and was, in fact, not unsurprising given that Indonesian cities (located in urban areas) normally have better human resources than the districts (located in rural areas). The assumption was also true for the case of in-Java and out-of-Java ILGs. In-Java ILGs had the privilege of being prioritised to get more resource allocation from the central government. This condition was a result of development strategies implemented by the New Order regime administration. Obviously this put Java Island as the centre and focus of national development programs.

With regard to development of indicators, lack of resources does have an impact. This result partially supports the claim of Van Dooren (2005) that lack of resources has an impact on both development and use of performance indicators. This explains why the types and locations of ILGs did matter in this case. Cities and in-Java ILGs tend to have better resources (e.g. human resources) than district and out-of-Java ILGs.

With respect to the use of indicators, unlike in the development of indicators, there is generally no difference between type, location, and size of ILG regarding the extent of use. The only exception was for the use of indicators at the higher level where city governments indicated they used performance indicators more than those of district governments. The mean was 3.74 and 3.29, respectively. Hence, when it comes to the use of indicators, type, location, and size of ILG does not matter as the majority of ILGs are concerned only about developing indicators to include in the LAKIP as a formal report and do not really care about their managerial use. Interview results confirmed this finding as many interviewees stated that their concern was on producing the report, not on using them. This again provided strong support for coercive isomorphism.

**Table 8.5: Comparison on the Extent of Accountability**

	Accountability	
	Internal	External
Type	No difference	No difference
Location	No difference	No difference
Size	No difference	No difference

As summarised in the table there is no difference regarding the extent of internal and external accountability, regardless of type, location, and size of ILG.

### 8.3.2 Research question two and three

Secondly, to answer the second and third research questions, both the first and second-generation multivariate analytical tools, OLS and PLS, were employed. Table 8.6 presents a summary of the findings.

**Table 8.6: Factors Influencing PMS and Accountability**

No.	Influencing Factors for	Tool of Analysis	
		OLS	PLS
	<i>Development</i>		
1	Metric Difficulties	Strong	Strong
2	Technical Knowledge	Weak	Strong
3	Management Commitment	Strong	Very Strong
4	Legislative Requirements	Strong	Very Strong
	<i>Managerial Use</i>		
1	Metric Difficulties	<i>No Influence</i>	<i>No Influence</i>
2	Technical Knowledge	Strong	Strong
3	Management Commitment	Very Strong	Very Strong
4	Legislative Requirements	Strong	Very Strong
	<i>Higher Use</i>		
1	Metric Difficulties	<i>No Influence</i>	<i>No Influence</i>
2	Technical Knowledge	<i>No Influence</i>	<i>No Influence</i>
3	Management Commitment	Strong	Very Strong
4	Legislative Requirements	<i>No Influence</i>	<i>No Influence</i>
	<i>Internal Accountability</i>		
1	Management Commitment	Very Strong	Very Strong
2	Legislative Requirement	Strong	Strong
3	Organisational Capacity	<i>No Influence</i>	<i>No Influence</i>
	<i>External Accountability</i>		
1	Management Commitment	Very Strong	Very Strong
2	Legislative Requirement	Strong	Very Strong
3	Organisational Capacity	Very Strong	Very Strong

In analysing the model proposed in this study, both OLS and PLS analysis generally provided the same results. PLS analysis, however, showed relatively stronger results than those of OLS for several cases. OLS analysis revealed a strong relationship between legislative requirements and the development of indicators. When PLS was used for analysing the same case, the relationship was found to be even stronger. The majority of relationships among variables were supported by both analyses. The relationships ranged from weak (only one case in OLS analysis) to very strong. Only a relatively small number of the proposed inter-variable relationships under examination (five out of eighteen) were not supported by the analysis.

The five proposed relationships that were not supported statistically were: 1) managerial use and metric difficulties; 2) higher use and metric difficulties; 3) higher use and technical knowledge; 4) higher use and legislative requirements; and 5) internal accountability and organisational capacity.

Lack of statistical support for the relationship between metric difficulties and the use of indicators (point 1 and 2) can be explained in two ways. Firstly, managers and top executives were using performance indicators that were already there (as someone else had developed them) without worrying about how the indicators were determined. In other words, they just took it for granted. Secondly, they only used indicators for formal reporting or political/ceremonial speeches and had never used the indicators for more substantial purposes such as for managerial and strategic decision-making processes.

As mentioned previously, normally it was assumed that top executives were the users of indicators, not the ones that were responsible for producing them. Hence, they did not have to worry about the technical knowledge necessary to be able to develop relevant indicators. Someone in the lower level of management produced the indicators in readiness for their use. Similarly, top executives were not concerned about regulations related to performance indicators, as their subordinates were responsible for dealing with them. In short, higher level executives did not have to worry about technical knowledge and regulations regarding PMS.

Organisational capacity is crucial to ensure success of an organisation, including achieving accountability goals. Strong support for the relationship between organisational capacity and accountability was consequently expected. However, this research found mixed results regarding the matter. Organisational capacity had a very strong relationship with external accountability but not with internal accountability. The possible explanation for this inconsistency is that it does not require many resources to increase internal accountability, but rather it needs commitment from both the leader and the subordinates. Therefore, any ILG, regardless of its organisational capacity, has the potential to improve internal accountability within its organisation. Conversely, it is not an easy task for many ILGs to fulfil external accountability. External accountability covers many different aspects, and hence, it requires a relatively high level of organisational capacity.

Interviews also revealed information supporting the survey results regarding the factors influencing the development and use of performance indicators. All interviewees indicated they agreed with the factors proposed in the PMS and accountability model. They also provided insight into the relative importance among the influencing factors as shown in Table 8.7.

**Table 8.7: Factors Affecting Development and Use of Indicators**

The Most Influencing Factor	Development	Use
Legislative Requirements	42%	50%
Metrics Difficulties	25%	25%
Technical Knowledge	25%	17%
Management Commitment	8%	8%

Further evidence gathered during the interviews strengthened the results of the survey. Among the four factors under examination, legislative requirement proved to be the most dominant factor influencing the development of performance indicators in ILG. Interview results indicated that institutional factors were considered by interviewees as more prevalent than technical or organisational factors in the implementation of a new management innovation, such as PMS. This was especially true when the innovation was imposed by a powerful organisation such as the central government. This supports de Lancer Julnes, and Holzer (2001) who argued that

actual implementation of a management innovation such as PMS is influenced by political and cultural aspects rather than by rational and technocratic ones.

### **8.3.3 Research question four**

Finally, the answer to the fourth research question was revealed with the use of thematic content analysis. The analysis determined that all three components of institutional isomorphism, being coercive, mimetic, and normative, did exist in the process of performance indicator development in ILG. Coercive isomorphism due to regulatory requirements was found to be the most predominant.

Strong support indicating the existence of coercive isomorphism became apparent during the interviews when all interviewees stated that they began to develop performance indicators when the central government, under President Habibie, in the early years of Reformasi Era issued Inpres No. 7/1999 regarding LAKIP (refer to Chapter 1, Section 1.3.3). This regulation required government organisations at every level to prepare and submit an annual performance report. The requirement commenced on the fiscal year of 2001, although it could be considered just another reporting requirement where evidence of coercive pressure relates to the perceived pressure for ILGs to perform. This was a very new beginning in Indonesia's public sector because, during more than three decades of the New Order Era under President Soeharto's administration (1966-1998), there was no performance reporting in government.

Since the reform era, the public has demanded more responsive services from the government. The implementation of Inpres on LAKIP was intended to improve government performance and, in turn, to increase the quality of public services. Unfortunately, despite a decade of its implementation, the quality of service provided was not as good as public expectation. It is crucial to understand why this happened.

One possible reason for the above is that the time available for ILGs to put PMS in place was quite short, given the fact that this was very new for them. Consequently, in the midst of uncertainty and many other constraints (e.g. lack of competence of the officials), ILGs did the best they could to produce the report but, as expected, the

quality of the reports submitted to the central government was quite low. There has not been any significant improvement, as it appears that the quality of performance reports submitted by ILGs remains low (for details refer to Chapter 7, Table 7.4). Despite the low quality of performance reports produced, many ILG officials interviewed claimed they were not concerned, as the goal of submitting the reports has been met. This situation suggests the practice of symbolic conformity in ILG because of imposed regulation by the central government. This supports Talbot (2008) who contended that managers in the public sector admit that legislation is often the main reason for changes.

Evidence for the existence of mimetic isomorphism in ILG was also found during the interviews. Many officials from ILG located out-of-Java admitted that in the process of producing their performance reports they often referred to or even copied the performance reports from more advanced ILGs nearby, if they existed. Otherwise, they looked for examples from in-Java ILGs. The practice of copying others was the fastest and easiest way to produce the reports. In addition, by copying the reports from more advanced ILGs, perceived as being successful, less advanced ILGs would be considered legitimate in the view of their stakeholders, especially the central government.

The existence of mimetic isomorphism in ILG is consistent with the finding of Barreto and Baden-Fuller's (2006) study regarding international imitation. They found that organisations imitate the practices of others in order to gain legitimacy. They argued that there is a tension between the pressures to conform and the pressure to perform. Unfortunately, the practice of simply imitating others has a negative impact on organisational performance as organisations tended to put more emphasis on conforming rather than performing.

As in the Portuguese context described in Barreto and Baden-Fuller (2006), in the Indonesian context this negative consequence has also emerged. For a decade, many ILGs copied LAKIP from others to produce their reports before submission to the central government. By doing so they were able to fulfil the regulation requirement and, in turn, maintain their legitimacy. Unfortunately, there was no substantial improvement in terms of ILGs' performances. Therefore, the claim that reporting of

performance indicators in the Indonesian context was more to conform than to perform is true. In other words, it was only symbolic in nature.

The interviews also provided evidence on the existence of normative isomorphism in ILG. In the midst of the pressures of time and lack of competency, many ILGs had to find assistance to produce the reports. In the early years of PMS implementation, many of them received assistance from external expertise (e.g. BPKP and local universities). The assistance given ranged from direct technical assistance to produce the report to the provision of a series of training sessions to improve the capacity of ILG officials in the area of PMS. In line with this finding, Arnaboldi et al. (2010) found the important role of external consultants in the adoption of managerial innovations in the Italian public sector. This reflects the existence of normative isomorphism in another public sector context.

#### 8.3.4 Other findings

##### *From the survey*

One of the most significant contributions of this thesis is the discovery of a new model designed to explain further the relationships amongst the variables. In addition to the initial hypothesised relationships, the new model provided new significant relationships amongst variables. Table 8.8 presents the new relationships and the significance level of the associations.

**Table 8.8: Additional Relationship**

No.	Relationship	Significance
1	Leg -> Com	+++
2	Cap -> Com	+++
3	Met -> Com	++
4	Kno -> Com	++
5	HUse -> IAcc	+++
6	IAcc -> EAcc	+++
7	Dev -> MUse	++
8	Dev -> HUse	+++

Legend:

+++ = highly significant, ++ = significant



Firstly, out of eight new relationships found, four of them were highly significant with the others being significant. The first four related to management commitment. As discussed in previous sections, management commitment had a strong influence on the development and use of performance indicators. These findings were very important in the study. Therefore, knowing the variables that influenced management commitment was also very important. Table 8.8 shows that management commitment was highly influenced by legislative requirements and organisational capacity. Two other variables that significantly influenced commitment were metric difficulties and technical knowledge. The fact that legislative requirements had a stronger influence on commitment than technical knowledge supported the existence of coercive isomorphism. ILG showed higher commitment due to legislative requirements than that caused by the more technical and normative issues such as measurability and knowledge of performance measurement. Secondly, higher use of indicators highly influenced internal accountability and, in turn, external accountability. This means that the higher the level of use of performance indicators, the higher the level of accountability. These finding implied that in order to become accountable externally, ILG needed to first use indicators to enhance its internal accountability. Finally, managerial and higher uses of indicators were influenced by the development of indicators. The more performance indicators developed by ILG, the more they were used for managerial and strategic uses.

#### *From the Interviews*

Aside from answering the four research questions, factors impeding the implementation of PMS in ILG also emerged during the interviews. Table 8.9 presents the three impeding factors revealed.

**Table 8.9: Factor Impeding PMS**

The Most Impeding Factor	Percentage
1. Lack of motivation	50%
2. Lack of direction	33%
3. Lack of ability	17%

There is no doubt that motivation is a crucial aspect in the success of implementing any management innovation. Implementing PMS in ILG is no exception. Half of the

interviewees considered lack of motivation responsible for the unsuccessful implementation of PMS in ILG. This strengthened the findings of the quantitative analysis regarding managerial use of performance indicators in ILG. Amongst the eight managerial uses of performance indicators, their use for rewarding employees was ranked the lowest (refer to Chapter 5, Table 5.10). This implied that ILG's employees were not appropriately rewarded for their jobs. It is not surprising that motivation within ILG was lacking.

Meanwhile, with regard to top management commitment in supporting the implementation of PMS in their ILG, the interviews revealed that the majority of ILG top management had only a medium or even a low level of commitment. Table 8.10 presents the level of top management commitment in ILG.

**Table 8.10: Top Management Commitment**

Top Management Commitment	Percentage
1. High (>75%)	46%
2. Medium (50-75%)	25%
3. Low (< 50%)	29%

This result was in accordance with the survey where top management commitment emerged as the strongest factor affecting use of performance indicators (see Table 8.6). Less than half (46%) of ILG has relatively high top management support. Low commitment, in part, was responsible for the unsuccessful PMS implementation in the majority of ILGs. This finding is consistent with other research, such as that of Cavalluzzo and Ittner (2004) whereby they concluded management commitment was an important factor in the success of PMS implementation.

With respect to accountability practices, several interesting findings emerged during the interviews. These other findings related to the aspects of accountability, the reasons behind the practices, and the challenges that emerged during the implementation process. The majority of interviewees claimed that both financial and non-financial aspects of accountability were equally important. They also indicated that institutional factors (e.g. external pressure) dominated organisational factors (e.g. improving bureaucracy) as the reason behind accountability practices in ILG.

Finally, the most challenging factors in practicing accountability related more to political and moral aspects than to technical and organisational ones. This supported the claim that political commitment is essential in determining the success or failure of reform efforts (McCourt, 2003).

Before continuing to the implications of the research, the important results presented earlier are listed, in brief, to recall the main points of the findings:

1. ILG developed and used performance indicators only at a moderate level and still focused on input and output indicators instead of outcome indicators.
2. City governments developed more performance indicators than districts.
3. Java ILGs developed more performance indicators than out-of Java ones.
4. The size of a government organisation does not affect the development of performance indicators in ILG.
5. Metric difficulties, technical knowledge, management commitment, and regulation requirement did have an effect on the development of performance indicators.
6. Metric difficulties constituted the only factor that did not have an effect on the use of performance indicators at the managerial level.
7. Management commitment was the only factor that had an effect on the use of performance indicators at the higher level.
8. Management commitment, regulation requirements, and organisational capacity did have effect on external accountability.
9. Organisational capacity was the only factor that did not have an effect on internal accountability.
10. The interviews did confirm the results of the survey regarding the four factors influencing the development and use of performance indicators.
11. The interviews revealed that regulation requirements imposed by central government were the strongest influencing factor for the development and use of performance indicators in ILG.
12. The interviews revealed that lack of motivation, direction, and ability impeded implementation of PMS with lack of motivation found to be the strongest impeding factor.

13. The interviews revealed that top management commitment in implementing PMS in ILG was low.
14. Three components of institutional isomorphism, being coercive, mimetic, and normative, did exist in the process of developing and using performance indicators in ILG with coercive isomorphism found to be most prevalent.
15. As a result of the sensitivity analysis using PLS conducted in Chapter 6, a new model, as a refinement of the initial model developed at the beginning of the research, emerged. Given the quite strong relationships among the variables, this new model appears to be a highly promising conceptual model for future investigative research in the Indonesian public sector in particular, or in other countries across the globe.

## **8.4 Research Implications**

For decades scholars and practitioners have been interested in PMS and accountability practices in the public sector in many developed countries across the world. However, little research has been conducted in developing countries. Accordingly, this thesis contributes to this paucity by providing rigorous academic research with multiple practical implications. With regard to academic research, this thesis contributes at a theoretical, methodological, and analytical level.

### **8.4.1 Theoretical implications**

The implication to theory from this research is substantial as it identified various factors affecting the adoption and implementation of PMS and reporting in ILG. It confirms that all three components of institutional isomorphism are evident in the processes.

Coercive, mimetic, and normative isomorphism provided assistance to understand better the motivations and drivers behind PMS implementation in the last ten years. This contributes significantly to the application of institutional theory, especially institutional isomorphism, as the underpinning framework to explain the practice of PMS and accountability in the public sector.

Similar to the study conducted by Judge et al. (2010) and Han and Koo (2010), this study found the three components of isomorphism did exist in the implementation of PMS. Coercive pressures were found to be the most crucial amongst the three. This finding is also consistent with results of the study conducted by Mir and Rahaman (2005). They found that the major factor behind the decision to adopt IASs was to gain institutional legitimacy. Similarly, ILGs need this legitimacy to access funding from the central government who are responsible for the regulations.

It appeared that coercive pressures and lack of direction from the central government has triggered uncertainty and, in turn, encouraged mimicking practices among ILGs. Even though not as strong as coercive, mimetic isomorphism was found to play a role in ILG reporting. Under high levels of uncertainty during the first decade of reform with regard to PMS and reporting, ILGs believed they needed to mimic others in order to gain institutional legitimacy. This finding is in accordance with that of Barreto and Baden-Fuller (2006) who found the practices of imitating others widespread in the Portuguese banking industry.

Normative isomorphism was also present in ILG reporting; however, it was not as strong as the first two components. Widespread knowledge and training by the BPKP and universities also helped ILGs in maintaining legitimacy over time. Coercive, mimetic, and normative isomorphism existed in ILG because of its effort to gain legitimacy from the environment. This confirmed what other scholars in the field of organisational theory claimed—that gaining legitimacy is equally important to improving organisational performance. Unfortunately in the ILG context, many acknowledged that the motivation behind the implementation of PMS in ILG was mainly to gain legitimacy without considering actual organisational performance. As a result, this research confirmed prior literature (for example, Barreto & Baden-Fuller, 2006) that proposed that imposed regulations would create symbolic conformity.

In summary, this research extends previous research by identifying factors influencing the implementation of PMS and accountability practices, and by testing the applicability of institutional theory within an Indonesian public sector context. It

substantially contributes to institutional theory, particularly in developing countries, and begins to fill the gap in public sector management research in Indonesia.

#### **8.4.2 Methodological and analytical implications**

Both survey and in-depth interviews were used as data collection methods in this thesis. The combination of the two different research approaches into a single mixed approach increased the rigor of the study. This approach was found to be more capable of answering diverse and complex research questions than a single method approach. This project has demonstrated the applicability of a mixed method in the field of public sector management, especially in the area of performance measurement and accountability.

One of the major contributions of this thesis relates to the quantitative analysis. Two different generations of quantitative analytical tools are employed: 1) the first generation multivariate analysis—OLS regression, and 2) the second-generation multivariate analysis—PLS. The utilisation of these two generations of multivariate analysis provides assurance of the validity and robustness of the quantitative analysis results achieved. This thesis showed evidence that both OLS and PLS provide consistent results. The fact that PLS showed stronger results supports the claim that PLS is an appropriate tool for analysing a study involving causality among variables. This fact also supports the appropriateness of PLS analysis in a study with a relatively small sample. In addition, by using PLS, this thesis found several new relationships amongst variables that were not included in the initial model (for details, see Appendix A.6-5). The existence of these new relationships, which were not hypothesised in the initial model, was very useful in refining that model for future research.

### **8.5 Practical Implications**

Berman and West (1998) pointed out that it took about two decades for a new management innovation such as strategic planning and management by objectives (both were introduced in the 1970s) to gain widespread adoption (widely used in the 1990s). It seems that the diffusion process requires a long time as many new

management innovations are subject to re-examination and modification along the way as useless features are identified and abandoned and new, promising features are identified and adopted.

In some ways, the current state of the diffusion of PMS follows the path of the other management innovation implementation mentioned by Berman and West (1998). Indonesian government at every tier has embraced PMS and reported performance for over a decade. This thesis has presented a portrayal of ILG's endeavours in implementing the system in practice. Some issues emerging from the findings will be of immense interest and will assist local and central government, government auditors, and universities, to name a few.

### **8.5.1 Local government**

Difficulties in dealing with different types of performance indicators, especially outcome indicators, coupled with the lack of technical knowledge were cited as the major factors behind unsuccessful PMS implementation in ILG. To overcome this, better recruitment and appropriate education and training are required for officials and employees working in ILG, especially for those directly responsible for the preparation of performance reports. Frequently used modes in education and training are: (1) enrolment in academic degree programs; (2) enrolment in short-term training programs; (3) training of trainers; (4) on-the-job training; and (5) consultant services.

One important finding here was that the success of institutionalisation of PMS was mainly due to the availability of relevant skills and expertise within the ILG and the commitment provided by top level officials. The consistent and continuous attention to developing the capacity of government officials and employees at different levels was the key to success. Consequently, capacity building of these employees needs to be planned and budgeted to ensure ownership of the process and outcomes on all levels. Hence, there is a real need to allocate more funding to the local budgets that support capacity building to ensure success of PMS implementation in the future.

### **8.5.2 Central government**

From the national perspective, now is the right time to evaluate the outcome of the reform efforts. The central government is in need of valid and relevant information regarding what worked and what did not in ILG after a decade of reform. As the national policy maker, the central government issued many regulations related to the reform including the most notable ones regarding decentralisation that affects 497 (as of June 2009) ILGs across the country.

The findings of this thesis indicated that regulatory requirements (issued by central government) have a very strong influence on the development of performance indicators in ILG. Regulatory requirements are obviously considered as the factor that has the most influence in the process of producing performance reports. Despite the lack of knowledge and skills in dealing with performance indicators, ILG still managed to submit the performance report. Not surprisingly, in light of the lack of these skills, the quality of the reports was quite low. The finding suggests that the preparation and submission of performance reports were simply triggered by a perceived coercive pressure from central government through the enactment of regulations. This, in turn, implies a practice of symbolic conformity rather than a true effort to improve organisational performance. Bearing this in mind, the central government needs to consider this in designing future policies regarding new management innovations, such as the PMS, in order to avoid a negative effect resulting from the implementation of compulsory regulations.

The results from interviews also indicated that there was a lack of direction regarding the implementation of PMS in ILG. In this sense, the role of the central government as the ultimate policy maker at the national level is still very important despite decentralisation. The central government needs to continue providing policy guidance through evaluating, monitoring, and measuring provincial and local levels of performance and providing oversight on the PMS implementation. Given the lack of technical knowledge by the majority of ILG officials and employees, the central government needs to provide practical manuals regarding PMS, as these will become important tools in guiding them through various issues in a practical way.



Other than the problems with measurement and the technical capability of their employees and officials, ILG were in general also facing serious problems with top management commitment. This issue was considered as a more crucial factor than many of the other factors mentioned earlier. Many ILG employees claimed that even if they have the capacity required to implement the PMS, without commitment from the top, their efforts would be overlooked. The fact that they did not have the capacity coupled with low top management commitment was a perfect recipe for failure. Unfortunately, this was the case for the majority of ILGs.

Considering the significant impact of lack of management commitment on the employees' motivation in the past there appears to be an urgent need now to increase this commitment in the implementation of PMS. As in many other developing countries, Indonesia is in need of an award system that makes it possible to provide national acknowledgement for the implementation of successful PMS and subsequent reporting. This award system would create a competitive climate in the ILG environment and provide a positive attitude among city and district leaders regarding PMS.

Many interviewees were interested in an award system that was designed to acknowledge the quality of performance reports submitted by ILG. The actual award could be financial incentives (e.g. more budget allocation) or national acknowledgement (e.g. certificate of excellence, published national league table). ILG may post the certificate of excellence symbol, for instance, in any document published including on their website. This award would inform stakeholders (e.g. prospective investors) regarding the achievement of the ILG. This, in turn, may attract domestic or international investors to place direct investments in the ILG, and hence, increase economic growth.

The findings of this thesis show that isomorphism does exist in the implementation of performance reporting in Indonesian local government. Considering those findings, the same thing would be likely to occur in the implementation of an award system. It may well be perceived to be yet another coercive pressure on ILG if the award system is provided by the central government. The award systems can be used to achieve better outcomes, but can also become a burdensome formality.

The JawaPos Institute of Pro-Otonomi (JPIP)<sup>25</sup> pioneered an award system in ILG. However, this award system was designed for autonomy in general and not specifically for PMS. The main aspects assessed in this system are economic growth, public services, and local politics. Since its commencement in 2001, this award system has not had a significant impact on ILG performance, as JPIP is not legitimate enough to influence ILG officials.

The fact mentioned above may explain that implementing NPM tools to improve productivity in the public sector is not without limitation as evidence in this case. Such award systems may still be useful if implemented. However, the way they are implemented will be crucial to succeed. The requirement of the systems need to be construed and implemented in ways that fit the purpose and context in order to reinforce ILG's commitments. A more respected organisation is required if the award system is to have a significant impact on the behaviour of ILG officials. Therefore, the central government should take this responsibility to facilitate the emergence of a more legitimate and profesional award systems by coordinating different stakeholders to design and implement it. The award system should be managed by a professional and independent organisation at national level. In addition, the knowledge and involvement of the ILG's employees and officials is crucial as the most important aspect determining the success of such systems is whether it is accepted by the managed.

To accommodate an award scheme, the central government needs to build a data compilation system at the national level. This would enable comparison amongst provinces and local governments or even comparisons at an international level. Using the national database would ensure a fair and objective performance evaluation and comparison amongst ILG.

The central government plays an important coordination function in promoting and guiding the implementation of management innovation such as PMS at national,

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<sup>25</sup> An NGO owned by a national newspaper the *Jawa Pos*.

regional, and local levels. Unfortunately, lack of coordination was another impeding factor, which was raised by ILG officials during the interviews. To ensure success in the implementation process, the central government needs to play a bigger role in promoting dialogue amongst different levels of governments. This would increase coordination amongst them to avoid the emergence of overlapping or even competing new regulations or guidelines.

From the perspective of Indonesia as a whole, the findings found in the local government context are of great interest for the central government in designing appropriate strategies for implementing the newly launched national program called Reformasi Birokrasi (bureaucratic reform). In Indonesia, this program is considered as the second wave of reform (2010-2015). The findings presented and discussed in this thesis provide lessons learnt from the first wave of reform (1999-2009). By taking the issues identified here into account, a greater chance exists that the second wave of reform in Indonesia will be a success.

### **8.5.3 Government auditor**

As the auditor responsible for auditing and consulting on jobs for government organisations, BPKP has a strategic position and role in ensuring the success of any central government policy in the field of public management, in general, and involving PMS, in particular. By law, BPKP has the privilege of conducting both audit and consulting work for government organisations at all levels, including local government.

Results from this thesis should be of interest to BPKP as they provide information regarding current progress in PMS implementation and, in turn, assists them in conducting their routine audits. These findings provide valuable information regarding the factors influencing the development and use of performance indicators in ILG. In turn, this information will assist BPKP to create a better strategy in assisting ILG in dealing with issues regarding PMS and reporting.

As government auditors, BPKP would play an important role in diffusing best practice in PMS across the country. As they move from one ILG to the other, BPKP

could effectively disseminate the good practices from better-resourced ILGs located in Java Island, for example, to the less-resourced ILGs located out-of-Java. In time, this will improve the practice of the rest of the ILGs across the country. In institutional theory terms, the role of BPKP in diffusing PMS best practices across the country is labelled as normative isomorphism. To improve the quality of services, BPKP continues to build the capacity of its auditors. They frequently conduct internal workshops or seminars to share information with others, such as ILGs. In this forum, auditors may have the opportunity to learn from each other and, in turn, apply the lessons learnt in their next audit assignments. Ultimately, best practices will be widespread across Indonesia.

#### **8.5.4 Universities**

Universities have long been considered centres of excellence and agents of change in Indonesian society. Having many well-educated and qualified scholars and researchers, universities have the competency and capacity to contribute to the development of society. In fact, many scholars from universities provided significant contributions to the crucial reform movement in 1998 that triggered decentralisation.

Since the beginning of the reform, universities have played an important role in building the capacity of government employees and officials at all levels to cope with new management innovation such as PMS and accountability practices. Universities offer several alternative modes in the provision of capacity building: (1) degree programs (Bachelor, Master, and Doctoral), (2) medium-term training programs (one-three months), (3) short-term training programs (2-5 days), (4) in-house training, and (5) consulting services. Universities also provide support and constructive feedback regarding new policies released by the government through seminars and research publications. The findings of this thesis will be of interest to universities, as they will assist in enhancing capacity-building programs and in providing avenues for future research in the field of public sector performance measurement and accountability.

Enhancing public sector accountability is one of the important priorities of Indonesian government programs for the next 15 years. Improving accountability is

not an easy task for the majority of government organisations. This situation creates a new opportunity for universities to maintain or even increase their involvement and contribution to assisting government organisations in their continuing effort to reform. There is no doubt that Indonesia continues to struggle with the lack of organisational capacity, especially in terms of improving the quality of human resources working at all levels of government. Hence, from the point of view of universities, capacity building is an excellent example of a potential program for government organisations.

Currently, many universities (both public and private) in Indonesia, especially the large ones—for instance, UGM, Universitas Indonesia (UI), and Institute Technology of Bandung (ITB)—have directed their attention to the global market rather than merely the domestic one, as they have done in the past. Many of them have progressively built collaborative networks with different international aid organisations—such as USAID and AusAID—as well as universities in other countries as their counterparts to assist the Indonesian government in the development of programs. This international collaboration will definitely grow in the future, given the progressive reform efforts in improving government organisation performance. Therefore, universities need to maintain and expand their international networking in order to participate continuously in government programs, especially in capacity building.

During the last ten years, UGM, as one of only a few old and large universities in Indonesia, for instance, has been experiencing a significant change from a state university to a more independent one. One of its strategic goals is to increase its international exposure. Specifically, it aims to become a world-class research university. Unlike in the past when teaching was a dominant aspect in university life, UGM now puts research as its main priority.

Nationally, as government continues to implement reform, there are great opportunities for a university to participate in providing capacity-building programs and to conduct relevant policy research. Internationally, it could build networks in the field of performance measurement and accountability. By doing so, Indonesia can learn from the experience of developed countries that have implemented successful

public sector reforms. In line with government need and university missions, international collaboration can also flourish the fields of research and capacity building.

## **8.6 Strengths and Limitations of the Thesis**

This thesis employed a combination of quantitative and qualitative research approaches. By doing this, the researcher was able to maximise the strengths and reduce the weaknesses embedded in each individual approach when used separately. This mixed-method approach has advantages over the two more common methods of performance measurement research: the single-city case study and the multiple-city survey, usually without required documentation or follow-up to confirm respondent claims. The former typically lacks the breadth supplied by a multicity study. The latter, usually in the form of fixed-response mail surveys, often produces information of questionable reliability and relevance to performance measurement practice and has been criticised as methodologically inappropriate.

Concerning statistical analysis, this thesis utilises both OLS and PLS. Though prior studies have utilised and relied solely on regression analysis, a combination of both regression analyses using OLS (presented in Chapter 5) and PLS (presented in Chapter 6) is employed to provide a more rigorous explanation of the complex relationships between the technical and organisational factors under examination. It was revealed in the quantitative analysis chapters that the results of PLS were consistent with those of OLS. This finding supports the claim that PLS is more suitable for analysing data in which the response rate is relatively low.<sup>26</sup>

In addition, the new relationships amongst variables revealed from the sensitivity analysis discussed in Chapter 6 were an interesting and beneficial discovery. These not only revealed new relationships between two variables but also uncovered the existence of a chain of relationships among multiple variables. Hence, it provides further insight regarding a more complex relationship among variables. In the end,

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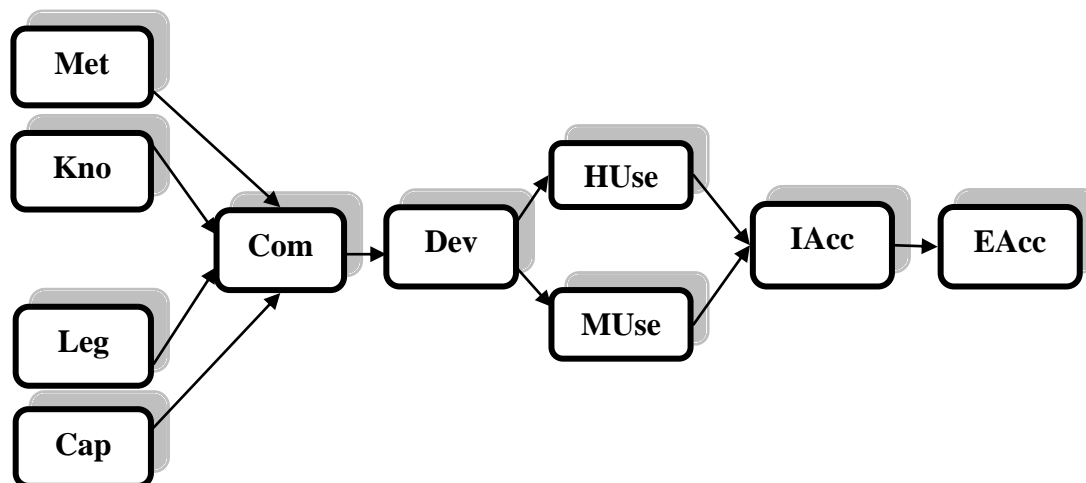
<sup>26</sup> The survey's response rate of this study is 22%

this will enable researchers to propose alternative conceptual models for future research. The model is discussed further in Section 8.7.

Like others, this thesis is not without its limitations. The empirical evidence provided is context-specific to ILGs as the third-tier government in Indonesia; however, the approach and the conceptual analysis have general validity, and hence, this research can be applied in other government contexts for future research.

## 8.7 The New Model

The emergence of new relationships among variables, uncovered following the sensitivity analysis, opens an opportunity for the refinement of the initial model. The strong relationships among the variables (refer to Table 8.8) are worth considering for research in the immediate future. After a comprehensive review of literature and prior studies, coupled with robust quantitative and qualitative analyses of results, a new model can be defined for further investigation. Figure 8.1 presents a proposed conceptual model for future empirical research.



**Figure 8.1: New Conceptual Model**

*Legend:*

Com = management commitment, Met = metric difficulties, Kno = technical knowledge, Leg = legislative requirements, Dev = development of indicator, MUse = managerial use of indicator, HUse = higher use of indicator, IAcc = internal accountability, EAcc = external accountability, Cap = organisational capacity- Path coefficient in bold = highly significant relationship

If compared to the initial model (see Chapter 3, Figure 3.1), the new model has a more complex structure with multiple sequential relationships amongst variables

within the model. In this new model, the ten variables can be grouped into three distinct categories: 1) the antecedent factors influencing the adoption, 2) the implementation process, and 3) the outcome expected from the implementation. Table 8.11 presents the variables within the three distinct categories.

**Table 8.11: Variables of the New Model**

Antecedent Factor	Process	Outcome
Metric Difficulties	Commitment to PMS	Accountability:  - Internal - External
Technical Knowledge	Development of Indicators	
Legislative Requirements	Use of Indicators:	
Organisational Capacity	- Managerial - Strategic	

It is argued here that there is a causal relationship amongst variables within the model as clearly indicated in Figure 8.1. Therefore, to test the new model under examination in future research, the use of PLS is highly recommended as it was designed to be able to demonstrate complex causal relationships. If this is the case, at the end the research process, another new refined model may appear. Should this iteration process continue, a robust model of PMS adoption and implementation could be the result. This, in turn, would significantly contribute to the enhancement of the body of knowledge in the area of performance management in the public sector.

## 8.8 Future Research

The immediate future research potential to undertake is to test the new model proposed in the previous section. In addition, there are a large number of possibilities for further research in the area of performance measurement, in particular, and accountability, in general. Firstly, this study focuses on ILG as the third tier of government in Indonesia. To expand the picture, this research could be replicated to provincial government (second-tier) or central government (first-tier) agencies. By covering all three tiers of government, a wider and holistic result would better



contribute to the national effort to evaluate a decade of reform in this area, and to the improvement of PMS and accountability practices and policies in the future.

Secondly, the unit of analysis in this study is ILG as a whole. Consequently, there was only one respondent representing a certain local government. It would be worthwhile to conduct a study involving multiple respondents within each local government. This might extend the explanation of the practices from many different perspectives.

Thirdly, this thesis could also be expanded by conducting research that involves respondents from the legislative branch, citizens, and NGOs as important stakeholders of ILG. This would enhance understanding of the user's perspective of performance reporting. In addition, it might uncover the real practices regarding political accountability, transparency, and participation as important elements of good governance.

Fourthly, it may also be desirable to conduct case studies exploring the implementation of PMS from the perspective of senior, middle, and operational managers in different tiers of government organisations. This would enable one to obtain a deeper understanding on how PMS is understood, interpreted, and operationalised across the management hierarchy.

Hence, there is scope for more research in order to generate a comprehensive understanding of performance measurement and accountability practices in the Indonesian public sector. Given the paucity of research in this area in Indonesia, the scientific knowledge deficit is so large that it makes it difficult to provide appropriate recommendations for sound public management policy, in general, and for performance measurement practices, in particular. Therefore, there is a need for more attention to scientific inquiry in the many different research approaches available and a need to apply those various research approaches to policies and practices in the area of public sector performance measurement and accountability.

In summary, this research has contributed to the current knowledge in the field of performance management and paved the way for future research prospects in the Indonesian public sector.

## **8.9 Concluding Remarks**

Implementing a new management innovation is definitely not an easy task. It is even more difficult when the organisation still struggles with the quality of its infrastructure. Most organisations in developing countries across the world, including Indonesia, face this typical problem.

More than a decade has passed since PMS was introduced in 1999 with the emergence of Inpres No. 7/1999. It is about the right time now to see what midcourse correction or modifications might be useful in the dissemination of PMS in Indonesia, specifically in ILG. If the pattern mentioned earlier is right, then PMS has another decade or so to go before it is widely used in Indonesia. Bearing that in mind, practically this thesis provides relevant and useful contributions to Indonesian public sector in its continuous attempt to enhance PMS and accountability practices. It provides insight into the practice by investigating several factors affecting the development and use of performance indicators as well as factors hindering the success of PMS in ILG.

In addition, the choice of institutional theory as a theoretical lens through which to examine the PMS process assisted in better explaining the development and use of performance indicators and accountability practices in Indonesia. Institutional isomorphism revealed the important influence of external organisations and the quality of human resources in improving PMS. It is expected, in the future, that the quality of PMS will increase with the provision of better and clearer guidance from central government, proper benchmarking among ILG, and continuous education to increase the technical knowledge of ILG' employees and officials.

A number of many different parties such as central government as the national policy maker, local governments as the ultimate services providers, BPKP as the

government auditor, and universities as the centres of excellence and agents of change in the society will find the results very useful. Proper utilisation of these findings will enable those parties to make the corrections or modifications required to maximise their contributions to the continuous efforts of enhancing PMS and accountability practices in Indonesia's public sector.

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## Appendices

### Appendix A.2-1 Different Uses of Performance Information

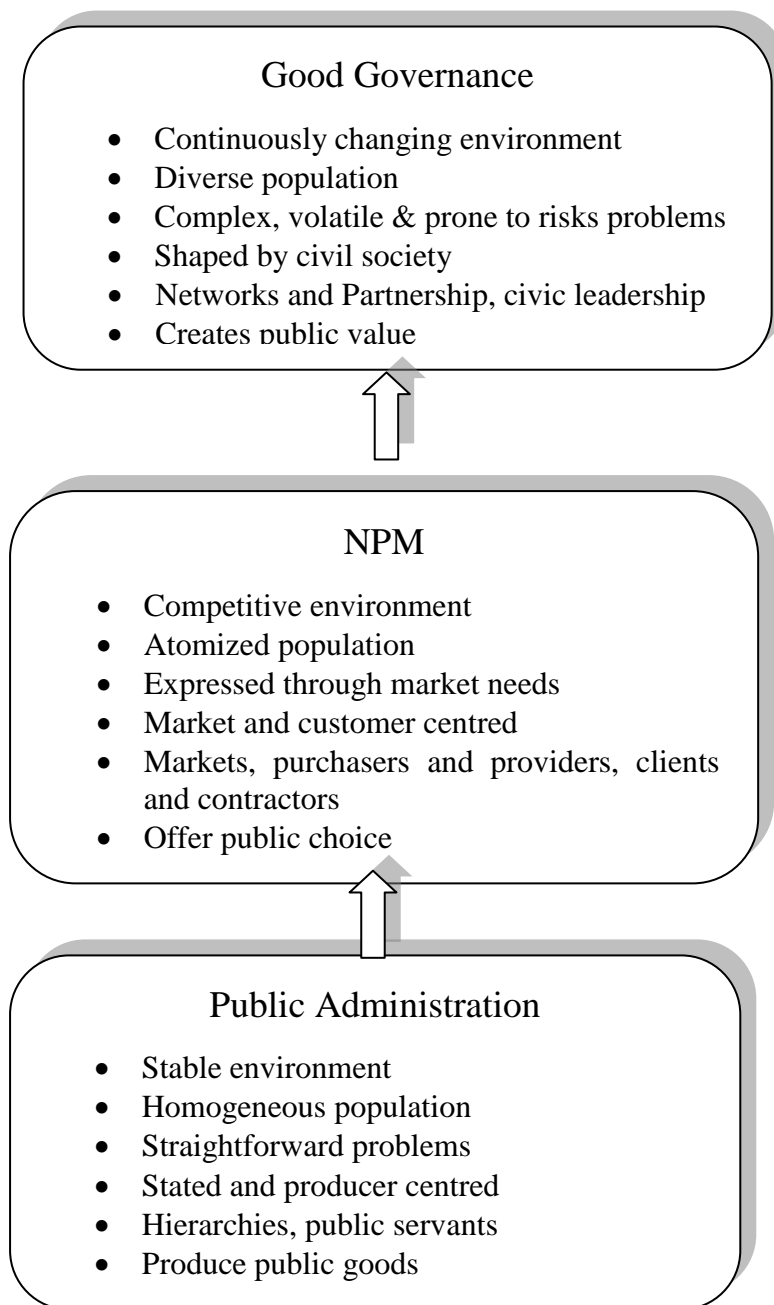
Uses of performance information	Writers								
	Mayston 1985	Osborne and Gabler 1992	GASB 1997	Hatry 1999	Wang and Berman 2000	Broom et al., 2000	GAO 2000	OECD 2003	GPP 2003
1.allocation of resources				x	x		x	x	x
2.changing work process / more efficiency				x	x		x	x	x
3.formulation and monitoring of licensed or contracted privatised services	x			x			x		x
4.rewarding staff / monetary incentives / performance pay		x		x			x		x
5.strategic planning			x	x		x			x
6.communication with the public to build trust			x	x	x				
7.reporting and monitoring			x		x				x
8.accountability to elected officials				x		x			x
9.accountability to the public				x		x			x
10.results based budgeting: budget documents		x	x	x					
11. results based budgeting: justified budget requests			x	x					x
12.motivation rewards for groups, organizations		x				x			x
13.evaluation of outcomes and effectiveness	x		x		x				
14.reducing duplicative services / delivery alternatives (including privatisation)			x		x	x			
15.adopting new program approaches / changing strategy			x			x			x
16.setting program priorities						x	x	x	
17.communication with the legislature and the legislative staff			x		x				
18.cost saving	x		x						
19.performance budgeting: no direct link		x				x			
20.setting individual job expectations / staff performance plans							x	x	



Uses of performance information	Writers									
	Mayston 1985	Osborne and Gabler 1992	GASB 1997	Hatry 1999	Wang and Berman 2000	Broom et al., 2000	GAO 2000	OECD 2003	GPP 2003	Poister 2003
21.cost benefit analysis	x			x						
22.trigger for further investigation and action	x			x						
23.enable customer to make informed choices	x									
24.improving responsiveness to customers			x							
25.creditor reporting						x				
26.grantor reporting						x				
27.output budgeting: pay per output		x								
28. outcome budgeting: pay per outcome		x								
29.changing appropriation levels			x							
30.performance budgeting: alongside budget figures						x				
31.cost accounting									x	
32.performance auditing									x	
33.capital management									x	
34.managerial incentive schemes	x									
35.management by objectives		x								
36.staff motivation / non-monetary incentives				x						
37.strategic HRM									x	
38.clarifying objectives	x									
39.quality model (TQM)		x								
40.sanctioning prolong low performance				x						
41.allocating discretionary funds to high performance agencies or programs				x						
42.communication between managers					x					
43.organizational development						x				
44.coordination of activities internally or externally							x			

Source: van Dooren (2005)

## Appendix A.2-2 Three Paradigms in Public Sector Management



Source: Hartley (2005)

**RESEARCH  
QUESTIONNAIRE**

**Performance Measurement and Accountability  
in Indonesian Local Government**

**Rusdi Akbar**

Curtin Business School—School of Accounting  
Supervisors: Dr. Robyn Pilcher and Dr. Brian Perrin

**CURTIN UNIVERSITY OF TECHNOLOGY  
2008**

## QUESTIONNAIRE

### Introduction

I am studying the local government's utilisation of performance measurement. As part of my study, I am sending a questionnaire to all local government senior officers (SOs), both *Kabupaten* and *Kota*, across Indonesia. This survey is being conducted to obtain information from SOs on their experience with performance measurement practices and related challenges. In the last decade, Indonesian government has been undertaking management reforms intended to shift the focus of government entities from tracking activity and staffing levels to setting goals for program performance, measuring results, and establishing accountability for those results.

Most of the questions in this questionnaire can be answered by checking boxes or filling in blanks. Spaces have been provided at the end of the questionnaire for any additional comments. The questionnaire should take about 30 minutes to complete. The survey results will be reported in summary form only and not on an entity-by-entity basis. Any discussion of individual answers or comments will omit any information that could identify the respondent.

It would be appreciated if you could return your completed questionnaire in the enclosed reply-paid envelope within two weeks of receipt. In the event the envelope is misplaced, the return address is:

Rusdi Akbar  
Fakultas Ekonomi Universitas Gadjah Mada  
Jl. Humaniora No. 1, Bulaksumur  
Yogyakarta 55281

If you have any questions, please contact:

Phone +62 274 560 775

Fax +62 274 563 212

Email [rusdi.akbar@postgrad.curtin.edu.au](mailto:rusdi.akbar@postgrad.curtin.edu.au)

I urge you to complete this questionnaire. I cannot develop meaningful information without your frank and honest answers. Thank you very much for your precious time.

## Section 1

### PERFORMANCE MEASUREMENT

#### Please Note:

- Performance measurement includes
- (1) developing performance measures to track progress made in achieving pre-determined goals and
  - (2) using performance information to make organizational and management decisions

#### Please check one box in each row

*1=no extent, 2=small extent, 3=moderate extent, 4=great extent, 5=very great extent*

### DEVELOPMENT

1. For programs/activities/projects in your Local Government (LG), to what extent, if at all, do you have the following performance measures?

"Extent to which my LG has performance measures related to...."	1	2	3	4	5
a. input (i.e. labour, material)					
b. output (i.e. quantity of products or services provided)					
c. outcome (i.e. customer satisfaction)					
d. operating efficiency (i.e. cost/unit)					
e. benefit (i.e. public/citizen satisfaction)					
f. impact (i.e. achievement of social objectives)					
g. process (i.e. narrative analysis of performance)					

2. For programs/activities/projects in your LG, to what extent, if at all, does your LG use the information obtained from performance measurement when conducting each of the following activities?

### MANAGERIAL USE

"Extent to which my LG uses information obtained from performance measurement when....."	1	2	3	4	5
a. setting strategy and program priorities					
b. allocating resources					
c. adopting new program approaches or changing work processes					
d. coordinating program efforts with other internal or external organizations					
e. refining program performance measures					
f. setting new or revising existing performance goals					
g. setting individual job expectations for government employees I manage or supervise					
h. rewarding government employees I manage or supervise					

### HIGHER USE

"To what extent do you agree with the following statements? "	1	2	3	4	5
i. performance measures from my activities are used to develop my LG 's budget					

j. funding decisions for my activities are based on performance measures					
k. changes by management above my level are based on performance measures					

### ACCOUNTABILITY

<i>"To what extent do you agree with the following statements? "</i>	1	2	3	4	5
l. officials at my level are held accountable for the results of their activities					
m. employees in my LG receive positive recognition for helping the LG accomplish strategic goals					
n. the individual I report to periodically reviews my activity's results with me					
o. lack of incentives (e.g. reward, positive recognition) has hindered using performance information					

### RESULTS TO DATE

	1	2	3	4	5
p. to what extent do you believe that your LG's effort to implement regulatory requirements on performance measurement to date have improved your organization's programs/operations/projects?					

### FUTURE RESULTS

	1	2	3	4	5
q. to what extent do you believe that implementing regulatory requirements on performance measurement can improve your LG's programs/ operations/projects in the future?					

### USEFULNESS

3. For program(s)/operation(s)/project(s) that you are involved with, to what extent, if at all, do you believe that performance measurement information is useful when participating in each of the following activities?

<i>"Extent to which I perceive the information useful when....."</i>	1	2	3	4	5
a. setting program priorities					
b. allocating resources					
c. adopting new program approaches or changing work processes					
d. coordinating program efforts with other internal or external organizations					
e. refining program performance measures					
f. setting new or revising existing performance goals					
g. setting individual job expectations for government employee I manage or supervise					
h. rewarding government employees I manage or supervise					
i. developing my institution 's budget					
j. making funding decisions					
k. changing policy					
l. holding employees accountable					
m. recognising employees accomplishment					

n. reviewing activity results					
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### METRIC DIFFICULTIES

4. Based on your experience with the program(s)/operation(s)/project(s) in your LG, to what extent, if at all, have the following measurement factors hindered measuring performance or using the performance information?

<i>"Extent to which the following factors hindered measuring performance or the use of performance information"</i>	1	2	3	4	5
a. difficulty determining meaningful measures					
b. results of our program(s)/operation(s)/project(s) occurring too far in the future to be measured					
c. difficulty distinguishing between the results produced by the program and results caused by other factors					
d. difficulty determining how to use performance information to improve the program					
e. difficulty determining how to use performance information to set new or revise existing performance goals					

### TECHNICAL KNOWLEDGE

5. Based on your experience in your LG, to what extent have you or your staff been involved in your institution's effort in improving technical knowledge related to performance measurement?

<i>"Extent to which....."</i>	1	2	3	4	5
a. I receive training on development and use of performance measures					
b. my staff receive training on development and use of performance measures					
c. I receive published information on how to develop performance measures					
d. my staff receive published information on how to develop performance measures					
e. my LG involve external experts or consultants in developing performance measures					

### MANAGEMENT COMMITMENT

6. Based on your experience in your LG entity, to what extent has LG management been committed to your institution's effort in improving performance measurement?

<i>"Extent to which....."</i>	1	2	3	4	5
a. my institution's top leadership demonstrate a strong commitment to achieving results					
b. the lack of ongoing top executive commitment or support for using performance information to make program/funding decisions hindered measuring performance or using performance information?					
c. the lack of ongoing congressional commitment or support for using performance information to make program/funding decisions					

hindered measuring performance or using performance information?					
--	--	--	--	--	--

### REGULATION REQUIREMENTS

7. Based on your experience in your LG entity, to what extent have you or your staff been involved in your local authority's effort in implementing regulation requirement on performance measurement (LAKIP)?

"Extent to which...."	1	2	3	4	5
a. I have been involved in my local authority's effort in implementing LAKIP					
b. my staff has been involved in my local authority's effort in implementing LAKIP					

### Section 2

### ACCOUNTABILITY

Please check one box in each row

1= strongly disagree, 2= disagree, 3= undecided, 4= agree, 5= strongly agree

### PERFORMANCE ACCOUNTABILITY

"Our LG informs residents, elected officials, and the business community about..."	1	2	3	4	5
a. organization-wide policy priorities/goals					
b. program goals and objectives					
c. program functions and activities					
d. program output measures					
e. program outcome measures					
f. program narrative performance information					
g. trends of performance measures					
h. comparisons of performance measures					

### ACCOUNTABILITY TOOLS

"To inform residents, elected officials, and the business community about our LG activities and performance, we use....."	1	2	3	4	5
<b>Professional Tools</b>					
a. municipal budgets					
b. annual financial reports					
c. financial audit reports					
d. program evaluation reports					
e. performance audit reports					
f. performance monitoring reports					
g. performance appraisal reports					
h. code of ethics					
<b>Political Tools</b>					
a. council meetings					
b. legislative meetings					
c. public hearings					
d. citizen survey reports					



e. citizen telephone hotlines					
f. citizen sms hotlines					
g. radio programs					
h. television programs					
i. websites					
j. news briefing/ conferences					
k. chamber of commerce meetings					

### REASONS FOR ACCOUNTABILITY

"The reasons for accountability reporting associated with ....."	1	2	3	4	5
<b>External pressures</b>					
a. political competition					
b. central government pressures					
c. critical elected official					
d. critical media					
e. critical business community					
f. critical citizens					
g. LG associations influence					
h. Other LG pressures					
i. Donor institutions pressures					
<b>Management commitment</b>					
a. employee willingness to expose performance					
b. manager willingness to expose performance					
c. top management willingness to expose performance					
<b>Organizational capacity</b>					
a. management information systems					
b. performance-based budgeting					
c. capable staffs					
d. budgetary surplus					

### Section 3

#### RESPONDENT DATA

Please check one box and fill in blank if appropriate

1. Type of your local government    ☐ *Kabupaten*                      ☐ *Kota*
2. Location of your organization    ☐ *in-Java Island*                      ☐ *out-of- Java Island*
3. Your organization vision statement

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4. Gender                                      ☐ *Male*                                      ☐ *Female*

5. Age                                      ☐ < 30                      ☐ 30–40                      ☐ 41–50                      ☐ > 50

6. Highest Education Level      ☐ *High School*                      ☐ *Bachelor*                      ☐ *Master*  
    ☐ *Doctoral*
7. Education Field                      ☐ *Accounting*  
    ☐ *Other* (please specify): \_\_\_\_\_
8. Years of employment in government      ☐ < 2                      ☐ 2-5                      ☐ 6-10  
    ☐ 11-15                      ☐ >15
9. Years of employment in current position      ☐ < 2                      ☐ 2-5                      ☐ 6-10  
    ☐ 11-15                      ☐ >15
10. Total revenue of your organization in 2007      Rp \_\_\_\_\_ (Billion)

### ADDITIONAL COMMENTS

If you have any additional comments regarding any previous question, comments concerning result-oriented management, or any comments/suggestions concerning the LAKIP, please use the space provided below. If necessary, you may add additional sheets.

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-----cut here-----

## FOLLOW UP CONTACT

Would you be prepared to participate in a face to face or telephone interview with the researcher to explore and explain a number of areas of performance measurement and accountability in local government in greater depth? This would be extremely beneficial to this study. If 'yes' please write your name and contact below:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Mode: ☐ Face to Face *or* ☐ Telephone

**Thank you very much for your kind assistance.**  
**Please return your completed questionnaire in the pre-paid envelope provided**  
**To maintain your confidentiality, the follow-up contact section may be returned**  
**in a separate pre-paid envelope (also provided)**

## Appendix A.4-2 Survey Minor Amendment

No.	Before	After
1.	<i>Questions were grouped into a specific sub-heading</i>	<p><i>Questions are not grouped into a specific sub-heading (sub-heading deleted)</i></p> <p><i>Reasons: sub-heading made respondent confused</i></p>
2.	<p><i>There were 3 negative questions (2.o, 6.b, 6.c)</i></p> <p>2.o. lack of incentives (e.g. reward, positive recognition) has hindered using performance information</p> <p>6.b. the lack of ongoing top executive commitment or support for using performance information to make program/funding decisions hindered measuring performance or using performance information?</p> <p>6.c. the lack of ongoing congressional commitment or support for using performance information to make program/funding decisions hindered measuring performance or using performance information?</p>	<p><i>Negative questions (2.o, 6.b, 6.c) are modified</i></p> <p>2.o. incentives (e.g. reward, positive recognition) has improved using performance information</p> <p>6.b. top executive commitment or support for using performance information to make program/funding decisions improved measuring performance or using performance information?</p> <p>6.c. congressional commitment or support for using performance information to make program/funding decisions improved measuring performance or using performance information?</p> <p><i>Reasons: negative questions confused respondent. In the case of 6.a and 6.b, these negative questions most likely were responsible for the reliability issues, as well. (Cronbach's alpha &lt; 0.6)</i></p>
3.	<p><i>Section 3 item 6 cover 4 group</i></p> <p>6. Highest Education Level</p> <p><input type="checkbox"/> <i>High School</i></p> <p><input type="checkbox"/> <i>Bachelor</i></p> <p><input type="checkbox"/> <i>Master</i></p> <p><input type="checkbox"/> <i>Doctoral</i></p>	<p><i>Section 3 item 6 cover 5 group (new group Diploma added)</i></p> <p>6. Highest Education Level</p> <p><input type="checkbox"/> <i>High School</i></p> <p><input type="checkbox"/> <i>Diploma</i></p> <p><input type="checkbox"/> <i>Bachelor</i></p> <p><input type="checkbox"/> <i>Master</i></p> <p><input type="checkbox"/> <i>Doctoral</i></p> <p><i>Reasons: some respondents did not find the right category for them. In Indonesia the level between high school and university is diploma</i></p>

**INTERVIEW QUESTIONS**

**Performance Measurement and Accountability  
in Indonesian Local Government**

**Rusdi Akbar**

School of Accounting—Curtin Business School  
Supervisor: Dr. Robyn Pilcher and Dr. Brian Perrin

**CURTIN UNIVERSITY OF TECHNOLOGY  
2010**

**Face to Face Interviews Questions with Senior Official  
Who is Responsible for Preparation of Performance Report  
in Indonesian Local Government**

**Name of Participant**

---

**District/City**

---

**Date of Interview**

---

**(Obtain a copy of their 2007/2008 financial and performance report)**

**Accountability**

1. How would you define accountability in a local government context?
2. For the last decade, there appears to have been an increased interest regarding accountability in Indonesia in general and in local government in particular. Do you agree? If yes, what do you think has influenced this?
3. What aspect of accountability is the most important to you as a performance report preparer?
4. To whom do you (personally) consider you are accountable? Why?
5. Who do you consider your local government is responsible to? Why?
6. To whom is your performance report distributed?
7. What do you see as the biggest challenge to achieving accountability?
8. What are the chances of success in achieving accountability in a local government environment? What percentage would you give for this success?

**Performance Measurement**

9. When you develop performance indicators how is the measurement of relevant components determined? Who is involved in the process of developing indicators? Do you consult other staff such as engineers?
10. Why does your organization develop performance indicators?
11. Have you had training in performance measurement systems? If yes, please provide details.
12. Do you consider top management in your organization is committed to the development of performance indicators? If yes, what percentage would you give this commitment?
13. Do you use performance indicators in your local government? If yes for what purpose?
14. Why does your organization use performance indicators?
15. Do you believe that public sector officials have a clearer understanding of their objectives as a result of providing performance indicators? If yes, please provide details. If no, why?
16. What do you see as the biggest challenge to developing and using performance indicators?
17. Does your organization prepare a strategic plan? For what period?

18. If you answered yes to Q17, are performance indicators parts of the strategic plan?

### **Isomorphism**

19. Is your local government dependent upon external funding to assist with the development of performance indicators? If yes, where does the funding for performance indicator development come from?
20. How do legislative requirements impact on the development of performance indicators?
21. Does the amount of funding you get impact on the number of performance indicators you develop?
22. Does the amount of funding you get impact on the number of performance indicators you use?
23. How do legislative requirements impact on the use of performance indicators?
24. What are these legislative requirements?
25. Do you refer to other local governments when preparing your performance reports?
26. Do you refer to external organizations—public or private—when preparing your performance report? If yes, what type of organizations?
27. Are you a member of any professional associations? Which ones? Do these organizations provide assistance in regards to the development and use of performance indicators within your organization?
28. Do you utilise outside expertise from universities or consulting firms to assist with your performance reporting practices?
29. Have you won an award? If so, which one (s)? Would you like to see an award system in place to recognise high performing local governments?

### **Others**

30. One of the results from the survey was that performance indicators are not integrated in local government budgeting systems. Do you budget for performance indicators? If yes, which ones and why? If not, why not?
31. There are three aspects that contribute to the success/failure of an innovation such as performance measurement systems, these are: 1) direction, 2) ability, and 3) motivation. Do you agree? If yes, how would you rank them in terms of importance? If no, what do you think they are? Why?
32. Are there any other comments you would like to make in regards to the matters raised in the interview?

### **Questions to specific ILG**

33. **Kab. Banjar**-I noticed in relation to the development of performance indicators you mention customer satisfaction only plays a very small role. Why is this?
34. **Kab. Hulu Sungai Tengah**-a) In relation to the development of performance indicators you mention that almost all types of indicators play a very small role. Why is this? b) In the survey you indicated that you do not use performance indicators for decision making. How are they used?

35. **Kab. Kulon Progo**-You indicated that performance indicators are not used for resource allocation decisions? Why is this? Is this common in all local government?
36. **Kab. Tabalong**-You indicated that external pressures have only a very small influence in accountability reporting. Why is this?

## Appendix A.4-4 Survey Supporting Documents

### COVER LETTER

June 30, 2008

**Bupati/Walikota**

Kabupaten/Kota: \_\_\_\_\_

Address: \_\_\_\_\_

Dear Sir/Madam,

I am currently undertaking research for my Doctor of Philosophy at Curtin University of Technology, Western Australia. I am studying the area of performance measurement and accountability in local governments within Indonesia.

Local government has undergone major changes within the last decade including the promulgation of new laws and regulation related to new public management in response to new demand for accountability from constituents in the era of decentralisation.

My research will provide insights into emerging practices on performance measurement, especially in the utilisation of performance measurement systems by local government and will address the importance of these practices to local authorities and their constituents.

The first stage of this research requires information using a questionnaire that needs to be completed by the Senior Financial Officer of each local government authority. It would appreciate if you could arrange to have the attached questionnaire completed and returned in the enclosed envelope. A second pre-paid envelope is provided if you supply your contact details as indicated on the last page of the survey.

All information will be treated with confidentiality. All information will remain secured. Only the researcher and supervisors will have access to the information for the purposes of the research project. No participant will be personally identifiable in any published material.

Your assistance in providing this information is greatly appreciated. If you have any queries or comments regarding this request please contact Rusdi Akbar within the Faculty of Economics and Business, Universitas Gadjah Mada, Yogyakarta on email [rusdi.akbar@postgrad.curtin.edu.au](mailto:rusdi.akbar@postgrad.curtin.edu.au), phone +62 274 560 775, Fax +62 274 563 212.

Yours faithfully

<b>Rusdi Akbar</b> PhD Candidate School of Accounting— CBS	<b>Dr. Robyn Pilcher</b> Supervisor School of Accounting— CBS	<b>Dr. Brian Perrin</b> Co-supervisor School of Accounting— CBS
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## PARTICIPANTS' INFORMATION SHEET

**Name of Project:**

"Performance Measurement and Accountability in Indonesian Local Government"

**Name of Investigator:**

Rusdi Akbar

**What is the study about?**

The primary aim of this research is to examine the factors influencing the development and use of performance indicators in Indonesian Local Government.

**Who is carrying out the research?**

This research is conducted by Rusdi Akbar, a PhD Student at School of Accounting, Curtin University of Technology, Perth, Australia.

**What does the study involves?**

This study involves sending a questionnaire to senior officials who are responsible for preparing and submitting the performance report **Importance of the study**

From a policy perspective, the study is significant in understanding the current practices of performance measurement. Given the nature of this study, it presents important avenues for future research in this area and may be of benefit to participants to help them improve their current practices without imposing any risks on them.

**What is required of participant?**

The participant is asked to complete a questionnaire about performance measurement and accountability practices in Indonesian local government. The questionnaire will take an average of 30 minutes to complete.

**What are the risks and benefits to the participant?**

Confidentiality is the only foreseeable risk to the participants and confidentiality issues have been carefully considered and are mitigated by measures detailed in the paragraph below. Feedback document about the results of the study will be sent to the participants.

**Confidentiality**

All information will be treated with confidentiality. All information will remain secured. Only the researcher and supervisors will have access to the information for the purposes of the research project. No participant will be personally identifiable in any published material.

**Participation**

Participation in the questionnaire is completely voluntary. Participants are at liberty to withdraw at any time without prejudice or negative consequences.

**Contact Detail of Human Research Ethics Committee**

Miss Linda Teasdale

Office of Research and Development, Curtin University of Technology  
GPO Box U1987, Perth WA 6845  
Email : [hrec@curtin.edu.au](mailto:hrec@curtin.edu.au)  
Phone : +61 (08) 9266 2784

**Contact Detail of Investigator**

Rusdi Akbar  
Email : [rusdi.akbar@postgrad.curtin.edu.au](mailto:rusdi.akbar@postgrad.curtin.edu.au)  
Phone : +62 274 560 775  
Fax : +62 274 563 212

**Contact Detail of Supervisors**

Dr. Robyn Pilcher  
Email : [r.pilcher@curtin.edu.au](mailto:r.pilcher@curtin.edu.au)  
Phone : +618 9266 2879  
Fax : +618 9266 7196

Dr. Brian Perrin  
Email : [b.perrin@curtin.edu.au](mailto:b.perrin@curtin.edu.au)  
Phone : +618 9266 7781  
Fax : +618 9266 7196

## ENDORSEMENT LETTER



**Prof. Dr. Mardiasmo, MBA, Ak.**  
**Direktorat Jenderal Perimbangan Keuangan**  
**Departemen Keuangan Republik Indonesia**  
**Jl. Dr. Wahidin No.1 Jakarta Pusat 10710**  
**Gedung D Lt. 16 Telepon 021-3509442 Fax 021-3509443**

1 September 2008

**Kepada Yth.**  
**Sekretaris Daerah**  
**Kabupaten/Kota**  
**Se Indonesia**

Pengukuran Kinerja di sektor publik umumnya dan di pemerintah daerah khususnya sangatlah penting dalam menunjang desentralisasi fiskal yang telah berjalan di negara Republik Indonesia dalam satu dasawarsa terakhir ini.

Penelitian tentang pengukuran dan pelaporan kinerja pemerintah daerah yang mencakup seluruh kabupaten/kota di Indonesia masih belum banyak dilakukan. Untuk itulah saya sangat mendukung setiap penelitian semacam ini karena hasilnya diharapkan akan memberikan kontribusi bagi pemerintah pusat maupun daerah dalam mengambil kebijakan publik untuk mensukseskan desentralisasi fiskal di Indonesia.

Sehubungan dengan penelitian berjudul "**Pengukuran Kinerja dan Akuntabilitas Pemerintah Daerah di Indonesia**" yang sedang dilaksanakan oleh Drs. Rusdi Akbar, MSc., Ak. PhD (*Cand.*) dosen Fakultas Ekonomika dan Bisnis Universitas Gadjah Mada Yogyakarta yang saat ini sedang menyelesaikan studi program doktor di *Curtin University of Technology, Perth Australia*, dengan ini saya memohon bantuan Bapak/Ibu Sekretaris Daerah Kabupaten/Kota di seluruh Indonesia agar meluangkan sedikit waktunya untuk dapat berpartisipasi dalam kegiatan penelitian ini, dengan catatan tidak mengganggu kesibukan Bapak/Ibu dalam menjalankan tugas sehari-hari.

Partisipasi Bapak/Ibu diharapkan dalam bentuk bantuan untuk mengisi *kuesioner* dengan lengkap berdasarkan pengalaman Bapak/Ibu selama ini di dalam menyusun LAKIP Pemda. Kuesioner penelitian yang telah diisi dengan lengkap kemudian mohon dikirimkan melalui pos ke alamat peneliti. Amplop dan perangko berlangganan telah disediakan oleh peneliti sehingga Bapak/Ibu tinggal memasukkannya ke kantor pos.


Semoga dengan bantuan Bapak/Ibu semua peneliti bisa memperoleh masukan yang berguna untuk dikaji lebih jauh guna menghasilkan informasi yang sangat diperlukan bagi kepentingan dunia akademik dan terutama untuk keperluan praktek pengukuran dan pelaporan kinerja di pemerintahan daerah Indonesia di masa yang akan datang. Atas peran serta dan perhatiannya saya mengucapkan banyak terimakasih.

Salam,

**Prof. Dr. Mardiasmo, MBA, Ak.**  
Dirjen Perimbangan Keuangan

## Appendix A.4-5 Interview Supporting Documents

### PERMISSION LETTER

	School of Accounting GPO Box U1987 PERTH WA 6845
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May 2010

**RE: APPLICATION TO CONDUCT RESEARCH ON "PERFORMANCE MEASUREMENT AND ACCOUNTABILITY IN INDONESIAN LOCAL GOVERNMENT"**

The above subject matter is hereby referred.

I am a Doctoral Candidate at the School of Accounting, Curtin University of Technology, Perth, Australia. In Indonesia, I am a lecturer attached to Universitas Gadjah Mada, Yogyakarta. Currently I am on full time study leave. I am conducting research on Performance Measurement and Accountability in Indonesian Local Governments. This research is towards fulfilling the requirement of my PhD thesis.

This is an independent study under Curtin University of Technology and all the information collected will be treated as confidential. To gather important information to assist this research, interviews will be conducted with relevant officers in local authorities on the reasons underlying the development and use of performance indicators and accountability practices in Indonesian Local Governments.


In the follow-up section of my questionnaire, you stated your availability to voluntarily participate in the interviews as the second stage of my study. I will be based in Yogyakarta from 19 July to 13 August 2010 and would appreciate being able to visit your organization during this time. I have identified your name: \_\_\_\_\_ from the District/City of \_\_\_\_\_ to participate in my interview. The interview session will relate to the experiences and perceptions and is NOT an assessment of the officer's skills or knowledge. A formal letter will be sent later to confirm about the date and the details of the interview.

If you would like further information about the study, please feel free to contact me on +614 23522390 or by email: [rusdi.akbar@postgrad.curtin.edu.au](mailto:rusdi.akbar@postgrad.curtin.edu.au) fax: +61 08 9266 7694. Alternatively, you can contact my supervisor, Dr. Robyn Pilcher on +61 08 9266 2879 or email: [r.pilcher@curtin.edu.au](mailto:r.pilcher@curtin.edu.au). I look forward to your response and answering any question regarding the research topic. Thanking you in advance for your assistance.

Yours faithfully,

Rusdi Akbar (13627256)  
Doctoral Candidate  
School of Accounting  
Curtin Business School  
Curtin University of Technology  
GPO Box U1987 Perth, WA 6845  
Email: [rusdi.akbar@postgrad.curtin.edu.au](mailto:rusdi.akbar@postgrad.curtin.edu.au)

## PARTICIPANT INFORMATION STATEMENT

	<b>School of Accounting</b> <b>GPO Box U1987</b> <b>PERTH WA 6845</b>
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### **Performance Measurement and Accountability in Indonesian Local Government**

#### **What is the Study About?**

The purpose of this study is to gather opinions about the reasons underlying the development and use of performance indicators and accountability practices in ILG. Subsequent to analysis of data from a recently conducted survey, a few issues emerged which need further clarification.

#### **Who is Carrying Out the Study**

The study is being conducted by Rusdi Akbar. Phone: +614 23522390 Email: [rusdi.akbar@postgrad.curtin.edu.au](mailto:rusdi.akbar@postgrad.curtin.edu.au)

#### **What Does the Study Involve**

The study involves obtaining information from ILG officers who are directly responsible for reporting performance indicators.

Permission will be sought from individual participants for the interviewer to use a digital voice recorder in addition to transcribing the answers to the particular questions.

#### **How Much Time Will the Study Take?**

It is envisaged that no more than 60 minutes will be required of the interviewee.

#### **Confidentiality**

Rusdi Akbar is the only person involved in the research. Confidentiality of all documentation/interview material is preserved. Resulting reports and papers will conceal the identity of the councils and any personnel interviewed. Once collated, a copy of the information will be distributed to interviewed ILG and again all identities will be concealed. Instead referencing will be something like: G1, G2, G3 to distinguish between respondents.

#### **Participation**


Participation in the interview process is completely voluntary: you are not obliged to participate and—if you do participate—you can ask the interview to be stopped at any time.

*I (the participant) have read and understand the Participant Information Statement, and any questions I have asked have been answered to my satisfaction. I understand that my participation is voluntary and I agree to participate in this research, knowing that I may withdraw at any time. I have been given a copy of the Participant Information Statement to keep.*

*If participants wish to make a complaint on ethical grounds the details of the Human Research Ethics Committee is provided in the box below.*

This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number \_\_\_\_\_). If needed, verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784 or emailing [hrec@curtin.edu.au](mailto:hrec@curtin.edu.au).

## PARTICIPANT CONSENT FORM

	<b>School of Accounting</b> <b>GPO Box U1987</b> <b>PERTH WA 6845</b>
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### **Performance Measurement and Accountability in Indonesian Local Government**

I, \_\_\_\_\_  
[name]

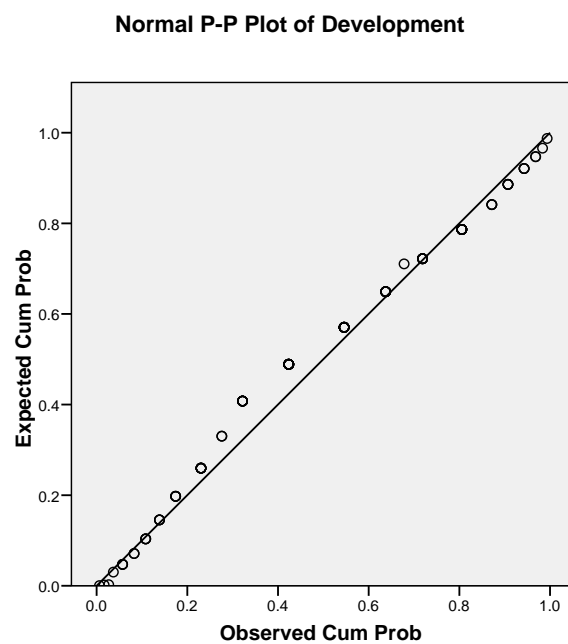
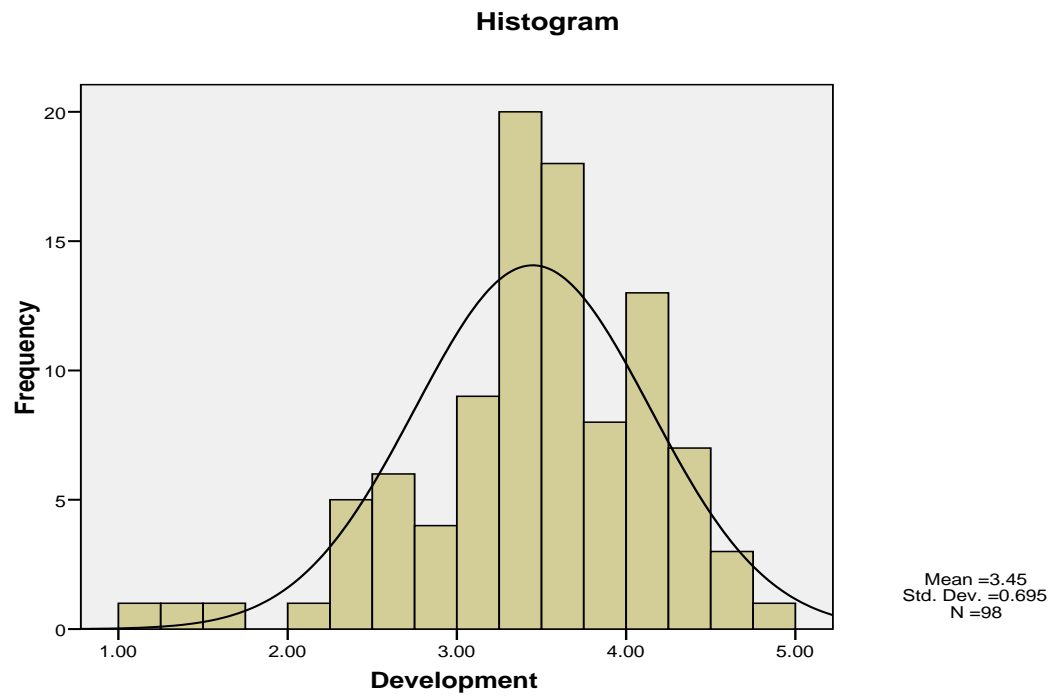
\_\_\_\_\_  
[address]

- freely choose to participate in this study and understand that I can withdraw without compromise at any time.
- agree to allow the interviewer to use a digital voice recorder to assist in the provision of a true and accurate record of the interview.
- also understand that the research study is strictly confidential.
- hereby agree to participate in this research study.

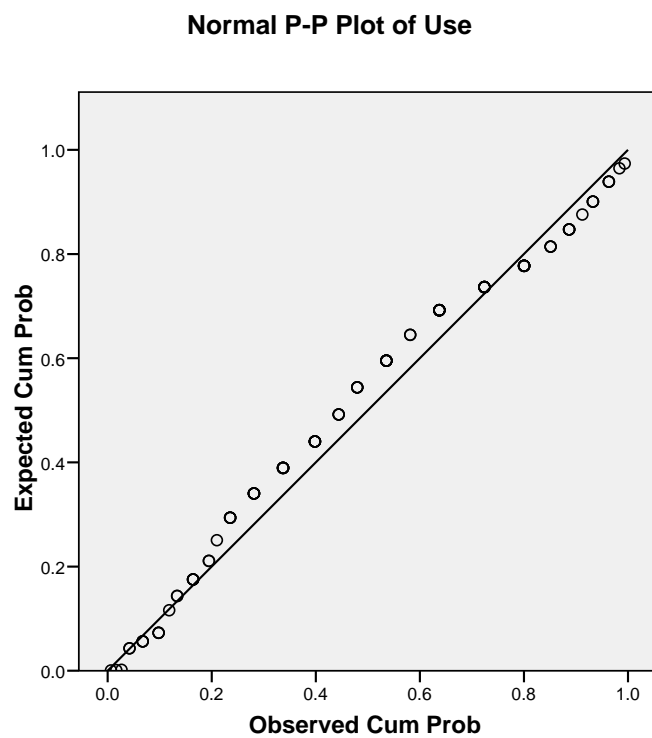
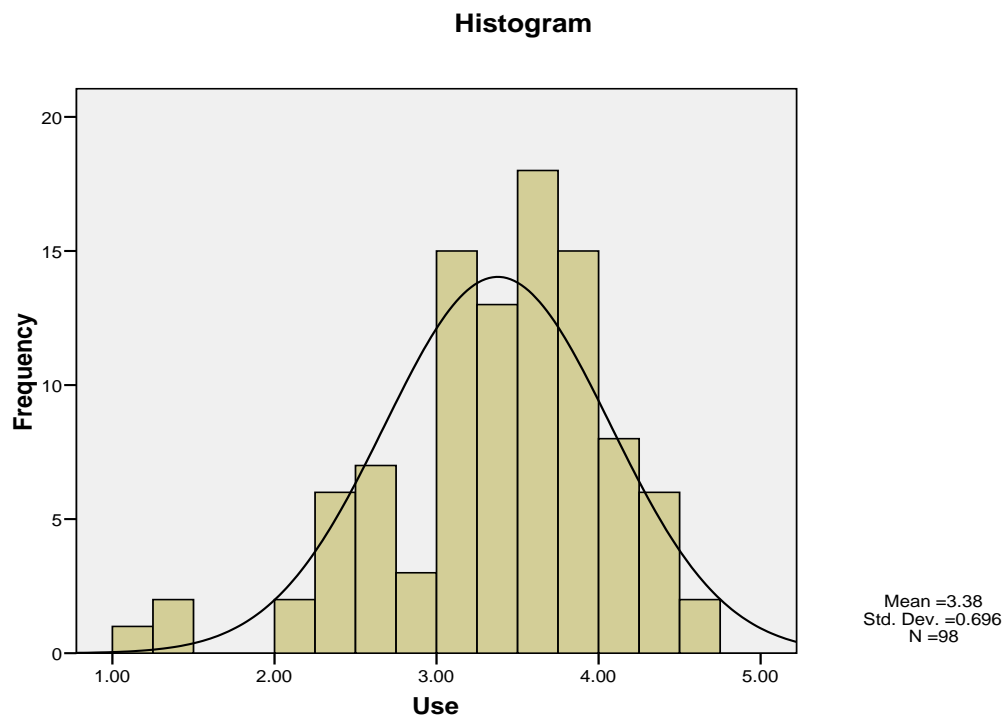
**Signature:** .....

**Date:** .....

## Appendix A.5-1 SPSS Output

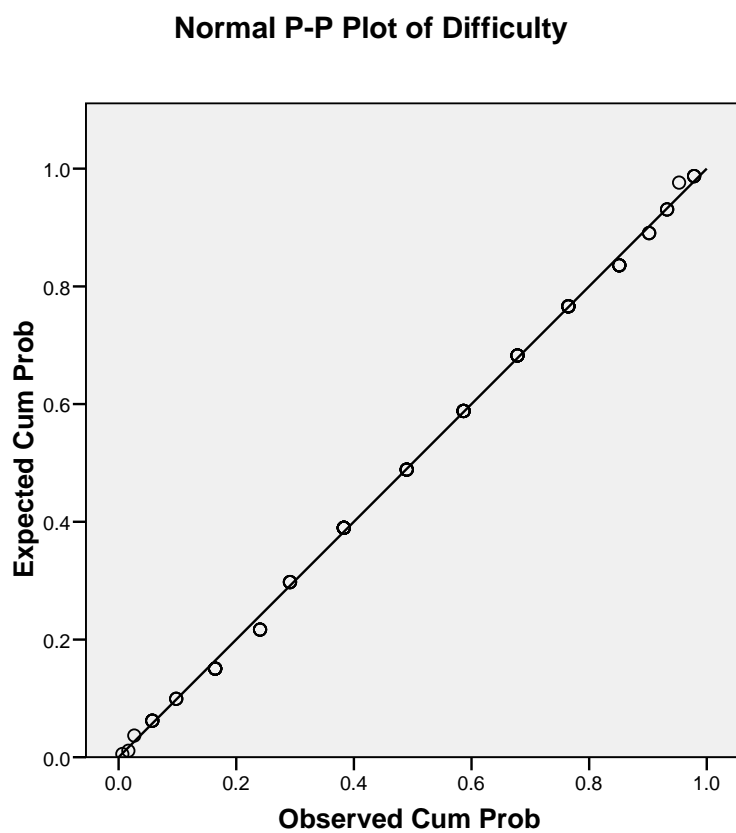
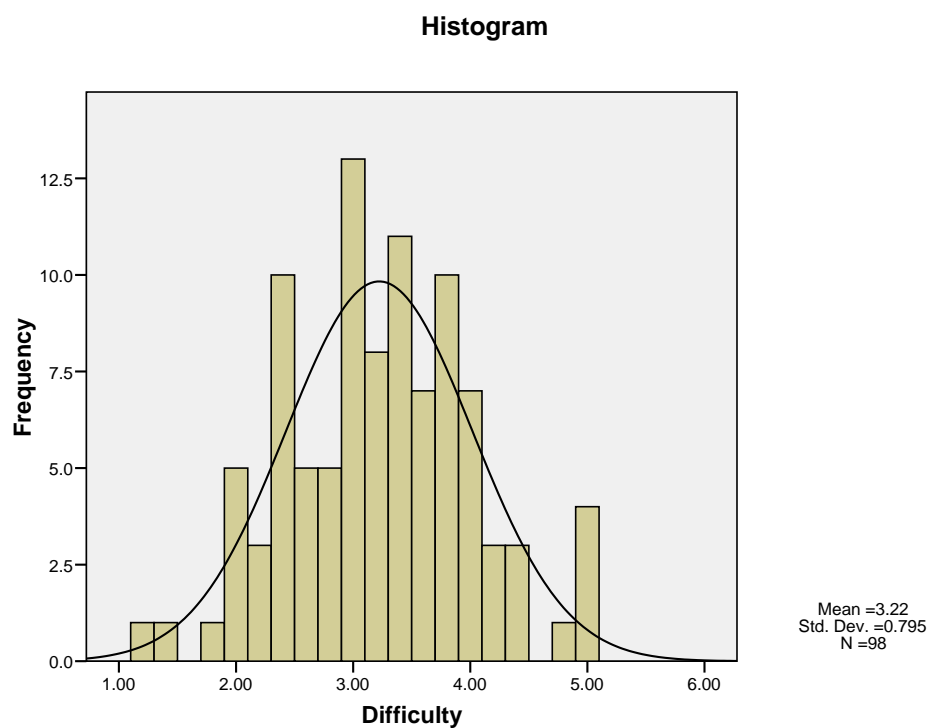


**Figure A5.1 Development of Measures**

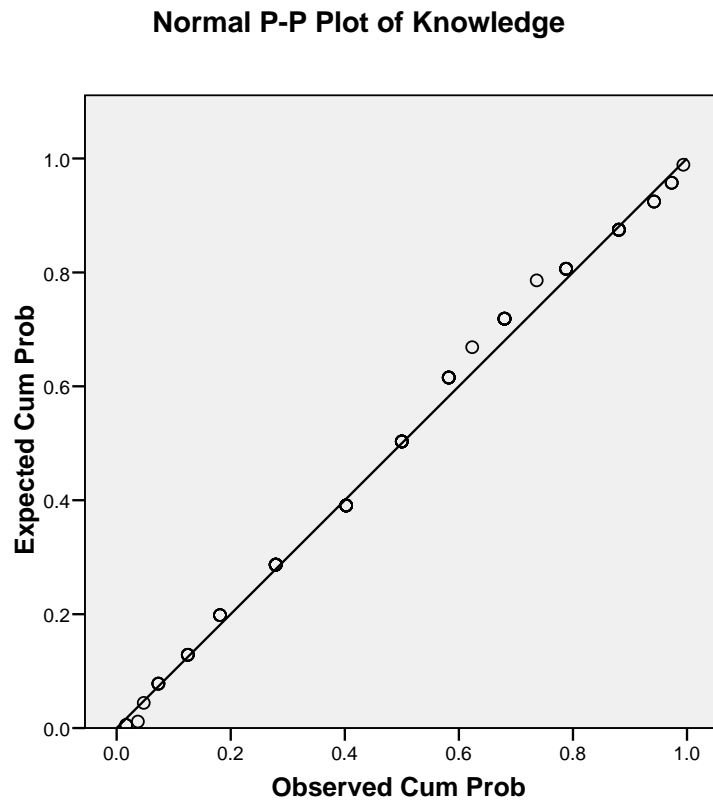
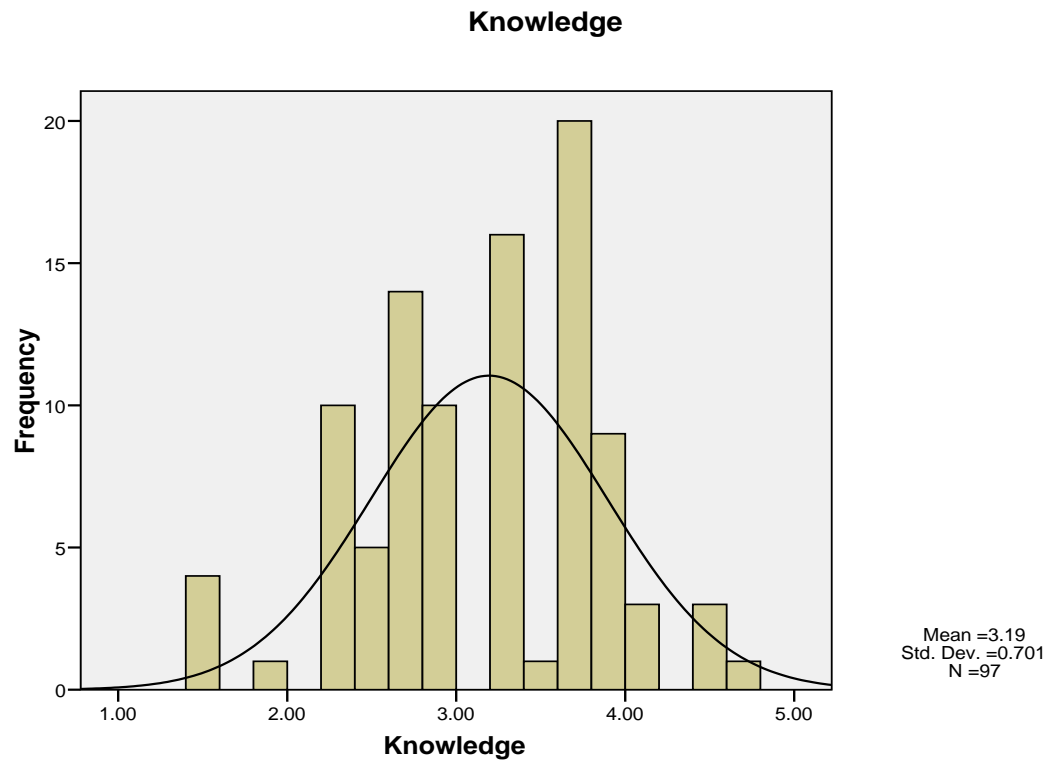


**Figure A5.2 Use of Measures**

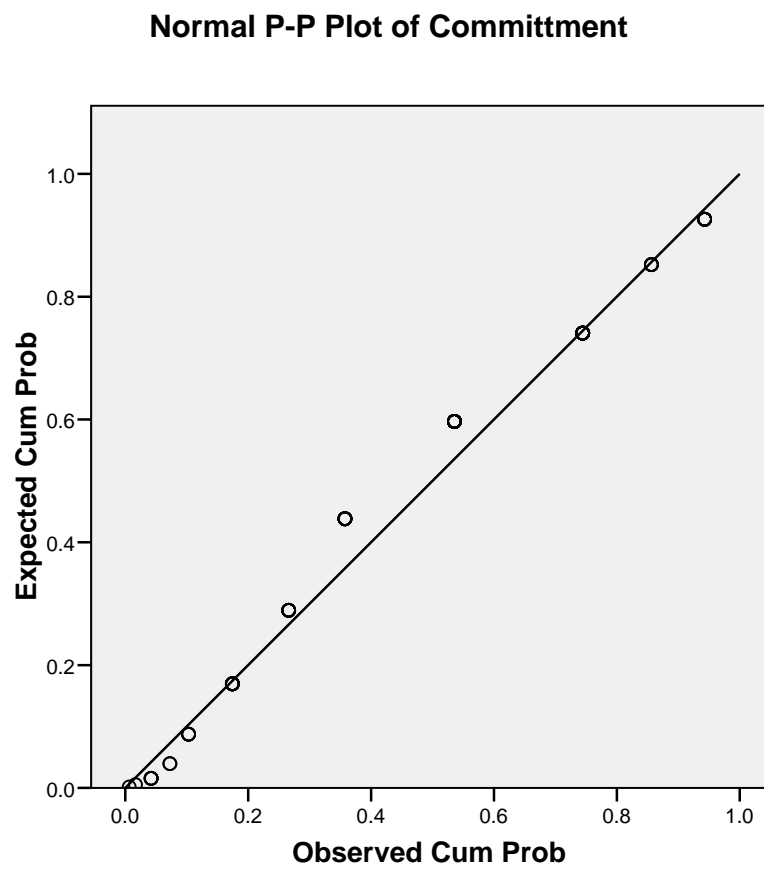
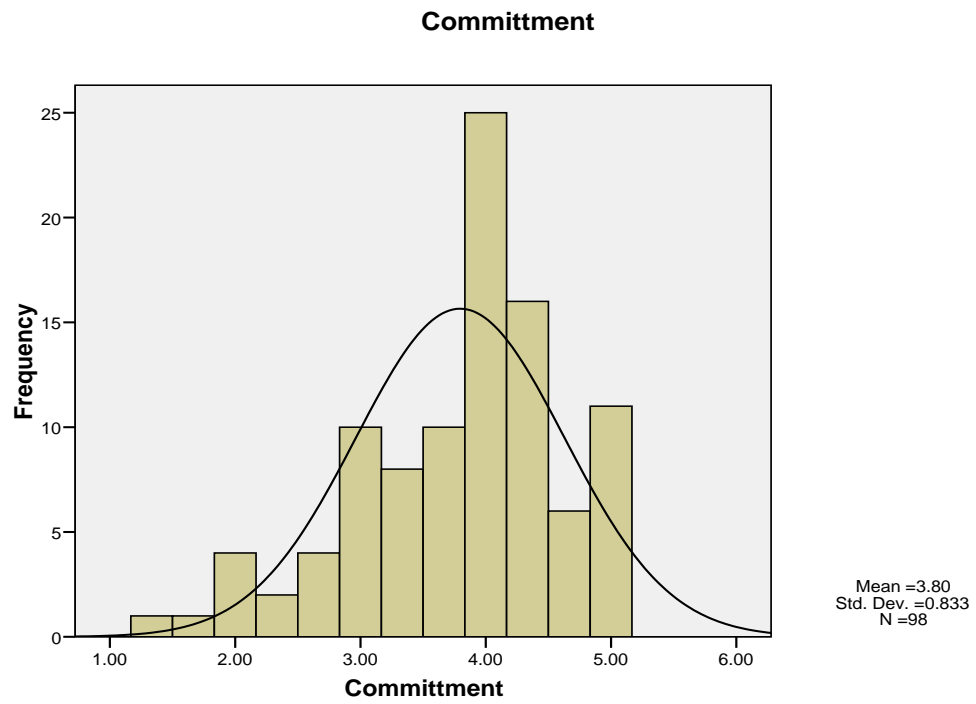




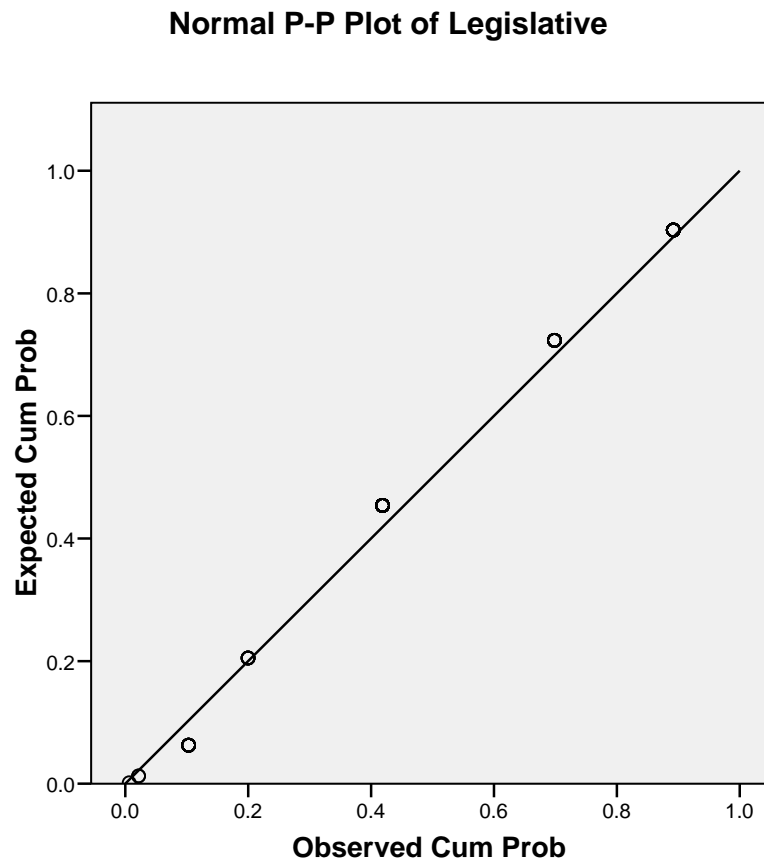
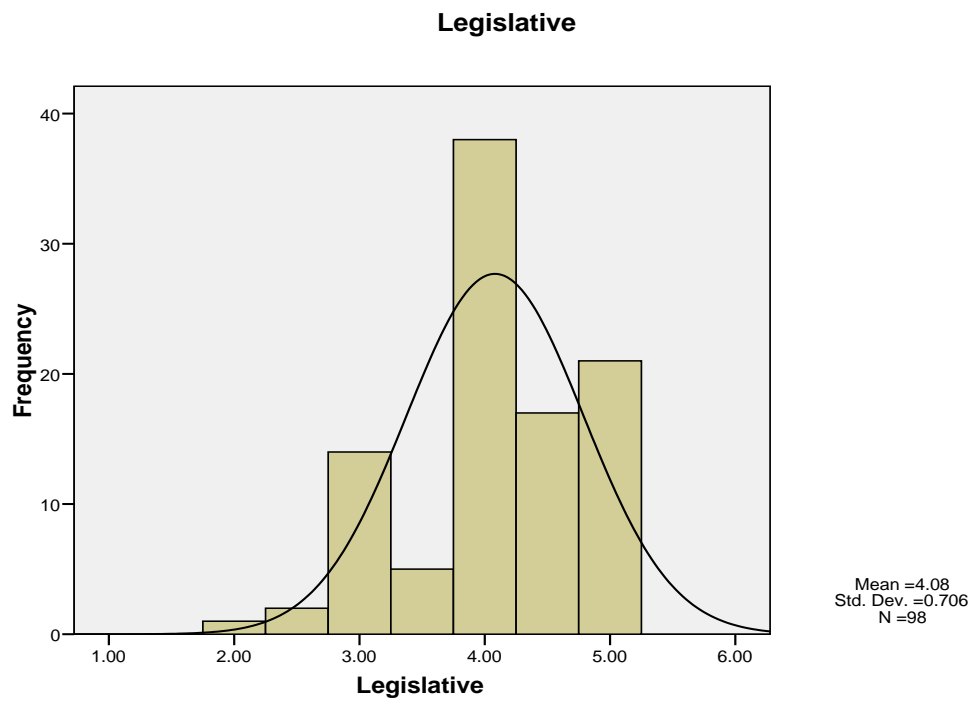
**Figure A.5.3 Metric Difficulties**



**Figure A5.4 Technical Knowledge**



**Figure A5.5 Management Commitment**



**Figure A5.6 Legislative Requirements**

### Appendix A.6-1 Cross-Loadings-Initial Model

	Cap	Com	Dev	EAcc	HUse	IAcc	Kno	Leg	MUse	Met
Cap_1	<b>0.855</b>	0.445	0.266	0.446	0.238	0.287	0.358	0.198	0.207	0.004
Cap_2	<b>0.803</b>	0.314	0.223	0.392	0.177	0.262	0.291	0.235	0.150	0.032
Cap_3	<b>0.681</b>	0.163	0.142	0.295	0.171	0.136	0.270	0.066	0.118	0.042
Cap_4	<b>0.619</b>	0.153	0.010	0.303	0.041	0.071	0.017	-0.012	0.012	0.196
Com_1	0.352	<b>0.893</b>	0.526	0.583	0.495	0.624	0.409	0.454	0.614	-0.130
Com_2	0.389	<b>0.940</b>	0.499	0.569	0.423	0.557	0.508	0.462	0.658	-0.219
Com_3	0.320	<b>0.887</b>	0.557	0.518	0.413	0.503	0.489	0.457	0.721	-0.283
Dev_1	0.120	0.228	<b>0.661</b>	0.173	0.280	0.227	0.368	0.393	0.375	-0.131
Dev_2	0.208	0.382	<b>0.747</b>	0.334	0.338	0.331	0.497	0.573	0.469	-0.100
Dev_3	0.236	0.510	<b>0.812</b>	0.448	0.481	0.425	0.410	0.412	0.529	-0.258
Dev_4	-0.034	0.401	<b>0.742</b>	0.245	0.327	0.295	0.246	0.343	0.451	-0.351

	Cap	Com	Dev	EAcc	HUse	IAcc	Kno	Leg	MUse	Met
Dev_5	0.224	0.570	<b>0.809</b>	0.450	0.466	0.415	0.439	0.390	0.553	-0.199
Dev_6	0.168	0.479	<b>0.748</b>	0.427	0.457	0.356	0.331	0.256	0.545	-0.224
Dev_7	0.300	0.457	<b>0.775</b>	0.428	0.274	0.258	0.404	0.321	0.517	-0.230
EAcc_1	0.383	0.464	0.424	<b>0.828</b>	0.340	0.576	0.420	0.506	0.414	-0.017
EAcc_2	0.329	0.476	0.412	<b>0.835</b>	0.398	0.538	0.383	0.448	0.447	-0.003
EAcc_3	0.379	0.541	0.405	<b>0.879</b>	0.340	0.604	0.469	0.494	0.452	-0.015
EAcc_4	0.500	0.435	0.406	<b>0.857</b>	0.261	0.502	0.416	0.331	0.396	-0.058
EAcc_5	0.408	0.441	0.341	<b>0.843</b>	0.245	0.445	0.429	0.310	0.388	-0.054
EAcc_6	0.350	0.552	0.379	<b>0.805</b>	0.438	0.561	0.518	0.402	0.501	-0.092
EAcc_7	0.481	0.637	0.462	<b>0.888</b>	0.417	0.597	0.522	0.435	0.563	-0.117
EAcc_8	0.496	0.599	0.447	<b>0.877</b>	0.421	0.534	0.428	0.403	0.523	-0.098
HUse_1	0.094	0.290	0.257	0.262	<b>0.776</b>	0.473	0.222	0.231	0.366	-0.099

	Cap	Com	Dev	EAcc	HUse	IAcc	Kno	Leg	MUse	Met
HUse_2	0.198	0.481	0.466	0.371	<b>0.933</b>	0.570	0.292	0.342	0.559	-0.093
HUse_3	0.264	0.485	0.542	0.456	<b>0.926</b>	0.643	0.411	0.359	0.634	-0.099
IAcc_1	0.110	0.130	0.142	0.205	0.290	<b>0.463</b>	0.286	0.251	0.172	-0.016
IAcc_2	0.270	0.591	0.446	0.583	0.544	<b>0.894</b>	0.444	0.497	0.495	-0.088
IAcc_3	0.270	0.567	0.423	0.612	0.572	<b>0.890</b>	0.425	0.498	0.507	-0.159
IAcc_4	0.176	0.514	0.291	0.509	0.583	<b>0.833</b>	0.313	0.304	0.474	-0.056
Kno_1	0.162	0.326	0.455	0.384	0.248	0.363	<b>0.773</b>	0.448	0.364	-0.225
Kno_2	0.306	0.423	0.487	0.445	0.340	0.388	<b>0.864</b>	0.413	0.488	-0.175
Kno_3	0.341	0.402	0.304	0.414	0.260	0.363	<b>0.755</b>	0.426	0.362	-0.114
Kno_4	0.272	0.425	0.326	0.409	0.309	0.354	<b>0.778</b>	0.393	0.468	-0.097
Kno_5	0.181	0.350	0.309	0.306	0.162	0.260	<b>0.521</b>	0.227	0.374	0.000
Leg_1	0.160	0.469	0.454	0.411	0.341	0.482	0.459	<b>0.924</b>	0.506	-0.034

	Cap	Com	Dev	EAcc	HUse	IAcc	Kno	Leg	MUse	Met
Leg_2	0.190	0.467	0.492	0.498	0.329	0.460	0.497	<b>0.931</b>	0.506	-0.045
MUse_1	0.160	0.555	0.603	0.374	0.423	0.311	0.409	0.512	<b>0.734</b>	-0.051
MUse_2	-0.053	0.564	0.513	0.390	0.471	0.519	0.326	0.492	<b>0.783</b>	-0.181
MUse_3	0.077	0.546	0.525	0.402	0.385	0.343	0.396	0.436	<b>0.813</b>	-0.237
MUse_4	0.254	0.652	0.545	0.467	0.489	0.465	0.388	0.461	<b>0.832</b>	-0.200
MUse_5	0.239	0.581	0.547	0.415	0.536	0.483	0.548	0.478	<b>0.832</b>	-0.247
MUse_6	0.149	0.549	0.443	0.433	0.451	0.406	0.516	0.387	<b>0.780</b>	-0.190
MUse_7	0.199	0.561	0.479	0.516	0.563	0.470	0.439	0.367	<b>0.754</b>	-0.257
MUse_8	0.068	0.558	0.409	0.405	0.475	0.448	0.443	0.258	<b>0.707</b>	-0.205
Met_1	0.040	-0.135	-0.227	-0.022	-0.072	-0.079	-0.115	-0.008	-0.229	<b>0.831</b>
Met_2	0.051	-0.251	-0.193	-0.053	-0.052	-0.032	-0.205	-0.046	-0.187	<b>0.837</b>
Met_3	0.071	-0.258	-0.279	-0.088	-0.175	-0.196	-0.128	-0.033	-0.243	<b>0.894</b>



	Cap	Com	Dev	EAcc	HUse	IAcc	Kno	Leg	MUse	Met
<b>Met_4</b>	0.065	-0.189	-0.281	-0.038	-0.109	-0.082	-0.174	-0.050	-0.193	<b>0.839</b>
<b>Met_5</b>	0.080	-0.130	-0.175	-0.097	-0.007	-0.054	-0.113	-0.049	-0.205	<b>0.827</b>

# Appendix A.6-2 Cross-Loadings-New model

	Cap	Com	Dev	EAcc	HUse	IAcc	Kno	Leg	MUse	Met
Cap_1	<b>0.874</b>	0.445	0.269	0.445	0.238	0.284	0.358	0.198	0.207	0.003
Cap_2	<b>0.818</b>	0.314	0.221	0.391	0.176	0.262	0.295	0.236	0.147	0.033
Cap_3	<b>0.654</b>	0.163	0.140	0.296	0.169	0.134	0.272	0.066	0.117	0.042
Cap_4	<b>0.584</b>	0.153	0.015	0.303	0.039	0.069	0.019	-0.012	0.012	0.198
Com_1	0.360	<b>0.891</b>	0.529	0.581	0.494	0.618	0.409	0.454	0.614	-0.136
Com_2	0.398	<b>0.941</b>	0.502	0.567	0.421	0.553	0.508	0.462	0.659	-0.223
Com_3	0.328	<b>0.889</b>	0.563	0.516	0.411	0.497	0.489	0.457	0.721	-0.284
Dev_1	0.123	0.228	<b>0.638</b>	0.173	0.279	0.225	0.368	0.393	0.371	-0.132
Dev_2	0.214	0.381	<b>0.730</b>	0.335	0.338	0.328	0.496	0.573	0.465	-0.100
Dev_3	0.237	0.510	<b>0.817</b>	0.447	0.479	0.420	0.404	0.412	0.528	-0.257
Dev_4	-0.021	0.400	<b>0.733</b>	0.244	0.325	0.292	0.244	0.343	0.451	-0.351

	Cap	Com	Dev	EAcc	HUse	IAcc	Kno	Leg	MUse	Met
Dev_5	0.228	0.570	<b>0.824</b>	0.449	0.462	0.410	0.436	0.390	0.554	-0.199
Dev_6	0.176	0.479	<b>0.769</b>	0.426	0.457	0.352	0.328	0.256	0.546	-0.220
Dev_7	0.310	0.458	<b>0.773</b>	0.428	0.274	0.251	0.403	0.321	0.517	-0.228
EAcc_1	0.382	0.464	0.425	<b>0.830</b>	0.339	0.574	0.422	0.506	0.415	-0.015
EAcc_2	0.328	0.475	0.419	<b>0.837</b>	0.398	0.537	0.383	0.448	0.448	-0.002
EAcc_3	0.383	0.541	0.409	<b>0.880</b>	0.340	0.602	0.469	0.494	0.453	-0.014
EAcc_4	0.495	0.435	0.408	<b>0.860</b>	0.261	0.500	0.415	0.331	0.396	-0.058
EAcc_5	0.407	0.440	0.345	<b>0.844</b>	0.244	0.441	0.430	0.310	0.389	-0.057
EAcc_6	0.356	0.552	0.385	<b>0.804</b>	0.438	0.555	0.516	0.402	0.502	-0.094
EAcc_7	0.485	0.637	0.468	<b>0.884</b>	0.417	0.593	0.523	0.434	0.565	-0.118
EAcc_8	0.498	0.598	0.452	<b>0.873</b>	0.421	0.529	0.430	0.403	0.526	-0.100
HUse_1	0.104	0.290	0.262	0.260	<b>0.785</b>	0.473	0.223	0.231	0.369	-0.099

	Cap	Com	Dev	EAcc	HUse	IAcc	Kno	Leg	MUse	Met
HUse_2	0.201	0.481	0.470	0.369	<b>0.928</b>	0.570	0.293	0.342	0.561	-0.094
HUse_3	0.266	0.485	0.548	0.454	<b>0.926</b>	0.646	0.409	0.359	0.636	-0.099
IAcc_1	0.117	0.130	0.140	0.206	0.290	<b>0.484</b>	0.283	0.252	0.172	-0.016
IAcc_2	0.275	0.590	0.449	0.583	0.544	<b>0.884</b>	0.446	0.497	0.497	-0.086
IAcc_3	0.278	0.565	0.424	0.612	0.572	<b>0.888</b>	0.425	0.498	0.509	-0.159
IAcc_4	0.179	0.514	0.296	0.509	0.584	<b>0.839</b>	0.313	0.304	0.479	-0.056
Kno_1	0.165	0.327	0.453	0.385	0.249	0.363	<b>0.768</b>	0.448	0.363	-0.225
Kno_2	0.315	0.424	0.487	0.445	0.340	0.389	<b>0.855</b>	0.413	0.489	-0.178
Kno_3	0.346	0.402	0.299	0.414	0.259	0.360	<b>0.770</b>	0.426	0.362	-0.116
Kno_4	0.277	0.425	0.321	0.408	0.311	0.352	<b>0.785</b>	0.393	0.468	-0.098
Kno_5	0.190	0.350	0.308	0.306	0.161	0.262	<b>0.514</b>	0.227	0.371	-0.003
Leg_1	0.167	0.469	0.447	0.410	0.340	0.481	0.460	<b>0.925</b>	0.505	-0.034

	Cap	Com	Dev	EAcc	HUse	IAcc	Kno	Leg	MUse	Met
Leg_2	0.199	0.467	0.484	0.498	0.328	0.454	0.498	<b>0.930</b>	0.504	-0.047
MUse_1	0.165	0.554	0.598	0.373	0.421	0.308	0.407	0.513	<b>0.729</b>	-0.051
MUse_2	-0.052	0.565	0.514	0.389	0.470	0.517	0.325	0.492	<b>0.786</b>	-0.181
MUse_3	0.081	0.546	0.523	0.401	0.384	0.338	0.394	0.436	<b>0.808</b>	-0.236
MUse_4	0.256	0.652	0.550	0.466	0.488	0.458	0.387	0.461	<b>0.832</b>	-0.197
MUse_5	0.244	0.581	0.545	0.414	0.534	0.484	0.545	0.478	<b>0.829</b>	-0.247
MUse_6	0.154	0.550	0.448	0.433	0.452	0.408	0.512	0.387	<b>0.777</b>	-0.190
MUse_7	0.205	0.561	0.487	0.515	0.564	0.471	0.438	0.367	<b>0.761</b>	-0.257
MUse_8	0.072	0.559	0.415	0.403	0.472	0.446	0.443	0.258	<b>0.712</b>	-0.204
Met_1	0.040	-0.136	-0.231	-0.021	-0.072	-0.072	-0.115	-0.008	-0.230	<b>0.824</b>
Met_2	0.045	-0.252	-0.191	-0.052	-0.053	-0.028	-0.205	-0.046	-0.188	<b>0.848</b>
Met_3	0.062	-0.259	-0.284	-0.087	-0.176	-0.197	-0.125	-0.033	-0.245	<b>0.896</b>

	Cap	Com	Dev	EAcc	HUse	IAcc	Kno	Leg	MUse	Met
<b>Met_4</b>	0.054	-0.190	-0.281	-0.037	-0.109	-0.085	-0.173	-0.050	-0.195	<b>0.837</b>
<b>Met_5</b>	0.076	-0.131	-0.174	-0.096	-0.009	-0.050	-0.114	-0.049	-0.205	<b>0.822</b>

### Appendix A.6-3 Comparison of Hypotheses Testing Results

No.	Ho	Path	OLS	PLS-Initial	PLS-New
1	H1a	Met -> Dev	++	++	++
2	H2a	Kno -> Dev	+	++	+++
3	H3a	Com -> Dev	++	+++	+++
4	H4a	Leg -> Dev	++	+++	+++
5	H1b	Met -> MUse	0	0	0
6	<b>H2b</b>	<b>Kno -&gt; MUse</b>	++	++	<b>0</b>
7	H3b	Com -> MUse	+++	+++	+++
8	<b>H4b</b>	<b>Leg -&gt; MUse</b>	++	+++	<b>0</b>
9	H1c	Met -> HUse	0	0	0
10	H2c	Kno -> HUse	0	0	0
11	H3c	Com -> HUse	++	+++	++
12	H4c	Leg -> HUse	0	0	0
13	H3d	Com -> IAcc	+++	+++	+++
14	H4d	Leg -> IAcc	++	++	++
15	H5a	Cap -> IAcc	0	0	0
16	<b>H3e</b>	<b>Com -&gt; EAcc</b>	+++	+++	<b>0</b>
17	<b>H4e</b>	<b>Leg -&gt; EAcc</b>	++	+++	<b>0</b>
18	H5b	Cap -> EAcc	+++	+++	++
19		Dev -> MUse			++
20		Dev -> HUse			+++
21		Met -> IAcc			0
22		Kno -> IAcc			0
23		Dev -> IAcc			0
24		MUse -> IAcc			0
25		HUse -> IAcc			+++
26		Kno -> EAcc			0
27		Dev -> EAcc			0
28		MUse -> EAcc			0
29		HUse -> EAcc			0
30		IAcc -> EAcc			+++
31		Met -> Com			++
32		Kno -> Com			++
33		Leg -> Com			+++
34		Cap -> Com			+++
35		Kno -> Met			0
36		Leg -> Cap			0

*Legend:*

+++ = highly significant, ++ = significant, + = marginally significant, 0 = not significant,  
bold = inconsistency results between initial and new model, blank = not applicable

Appendix A.6-4 Reliability, Internal Consistency, and Discriminant Validity—New Model

**Table A6.1: Item Reliability-New Model**

Construct	Item	Loading
Development of Indicator (Dev)	Dev_1	0.638
	Dev_2	0.730
	Dev_3	0.817
	Dev_4	0.733
	Dev_5	0.824
	Dev_6	0.769
	Dev_7	0.773
Managerial Use of Indicator (MUse)	MUse_1	0.729
	MUse_2	0.786
	MUse_3	0.808
	MUse_4	0.832
	MUse_5	0.829
	MUse_6	0.777
	MUse_7	0.761
	MUse_8	0.712
Higher Use of Indicator (HUse)	HUse_1	0.785
	HUse_2	0.928
	HUse_3	0.926
Internal Accountability (IAcc)	IAcc_1	0.484
	IAcc_2	0.884
	IAcc_3	0.888
	IAcc_4	0.839
External Accountability (EAcc)	EAcc_1	0.830
	EAcc_2	0.837
	EAcc_3	0.880
	EAcc_4	0.860
	EAcc_5	0.844
	EAcc_6	0.804
	EAcc_7	0.884
	EAcc_8	0.873
Metric Difficulties (Met)	Met_1	0.824
	Met_2	0.848
	Met_3	0.896
	Met_4	0.837
	Met_5	0.822
Management Commitment (Com)	Com_1	0.891
	Com_2	0.941
	Com_3	0.889
Technical Knowledge (Kno)	Kno_1	0.768
	Kno_2	0.855
	Kno_3	0.770
	Kno_4	0.785
	Kno_5	0.514
Legislative Requirements (Leg)	Leg_1	0.925
	Leg_2	0.930
Organizational Capacity (Cap)	Cap_1	0.874
	Cap_2	0.818
	Cap_3	0.654
	Cap_4	0.584



Table A.6.1 indicates that all indicators has loading value above the minimum requirement of 0.4. In regard to internal consistency, Table A6.2 presents the summary of output generated from SmartPLS software. For the new model adequate reliability is gained as composite reliability value is greater than 0.5. Hence, all constructs exhibit adequate reliability. The last column of the table contains the AVE for this mode. They are satisfactory as the values exceeding 0.5.

**Table A6.2: Internal Consistency and AVE-New Model**

Construct	Composite Reliability	Cronbach's Alpha*	AVE
Development	0.903	0.876	0.573
Managerial Use	0.926	0.908	0.609
Higher Use	0.913	0.858	0.778
Internal Accountability	0.865	0.791	0.627
External Accountability	0.955	0.946	0.726
Metric Difficulties	0.926	0.901	0.716
Technical Knowledge	0.861	0.793	0.559
Management Commitment	0.933	0.892	0.823
Legislative Mandate	0.925	0.838	0.861
Organizational Capacity	0.827	0.736	0.551

*Note:*

\*presented only for comparative purposes

Similar to the initial model, the new model undertook discriminant analysis test at both indicator and construct level using cross-loading matrix and comparing correlation of the construct and the AVE. It indicates that discriminant validity at the indicator level can be judged adequate. At the construct level, discriminant validity was also adequate as the variance shared between a construct and any other construct in the model is less than the variance that construct shared with its indicators. Table A6.3 presents the correlation matrix of the construct and the square root of AVE (in bold). It shows that diagonal values are greater than the off-diagonal values in their corresponding rows and columns, therefore all constructs in the new model met the requirement for discriminant validity.

**Table A6.3 Correlation of Constructs and the Square Root of AVE-New Model**

	Cap	Com	Dev	EAcc	HUse	IAcc	Kno	Leg	MUse	Met
Cap	<b>0.742</b>									
Com	0.399	<b>0.907</b>								
Dev	0.247	0.586	<b>0.757</b>							
EAcc	0.492	0.612	0.488	<b>0.852</b>						
HUse	0.227	0.487	0.504	0.422	<b>0.882</b>					
IAcc	0.280	0.614	0.440	0.638	0.646	<b>0.792</b>				
Kno	0.350	0.517	0.506	0.528	0.361	0.466	<b>0.748</b>			
Leg	0.198	0.505	0.502	0.490	0.360	0.504	0.517	<b>0.928</b>		
MUse	0.184	0.733	0.653	0.545	0.609	0.553	0.553	0.544	<b>0.780</b>	
Met	0.064	-0.236	-0.281	-0.069	-0.109	-0.112	-0.174	-0.044	-0.252	<b>0.846</b>

*Note:*

Bolded diagonal are the square root of AVE